

FINANCIAL TIMES

CIVIL AVIATION

Engine trouble stalls Rolls-Royce

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World News

Efta close to deal with EC over free trade zone

Negotiations to create a free trade zone between the EC and the European Free Trade Association were close to success last night, although Greece was insisting on further concessions over transit licences.

The EC Twelve and the seven-member EFTA narrowed their differences on the amount of extra aid Norway would make available, and the volume of "cohesion" aid and soft loans EFTA would provide for the EC's poorer members. Page 22

French ministers at bay

Prime minister Edith Cresson has forbidden members of her government to leave Paris without first receiving clearance. The security order comes after several violent demonstrations against government ministers by farmers who are angered by falling prices and possible EC agricultural policy reforms. Page 22

Missile talks to restart

The US and the Soviet Union have agreed to resume talks in Geneva early in January on President George Bush's proposals on ballistic missile defences. Page 7

Veteran Turk victorious

Veteran Turkish politician Süleyman Demirel was headed for victory in the general election, though a fragmented vote makes a coalition inevitable after eight years of rule by the Motherland party. Page 22

Major slams Commission

The row over the European Commission's intervention in environmental studies for seven construction projects in the UK flared again. John Major, Britain's prime minister, expressed "severe irritation" at the way the matter had been handled. Page 8

US Democrat to stand

Jerry Brown, former governor of California whose eccentricities earned him the nickname "Governor Moonbeam", has entered the race for the Democratic presidential nomination. Page 22

California fire rages

California firefighters were still struggling against a fire which has engulfed residential neighbourhoods close to the cities of Oakland and Berkeley, killing 10 people and destroying an estimated 600 homes. Page 6

Return of boat people

The repatriation from Hong Kong of all Vietnamese boat people moved a step closer after Vietnam agreed to accept the forced repatriation of about 250 boat people. Page 4

UK isolated on sanctions

Britain remained isolated on South Africa in spite of a more moderate Commonwealth stance on the lifting of sanctions. Page 4

Zaire crisis mounts

Troops of Zaire's elite presidential guard fired teargas and shots into the air to disperse thousands of pro-democracy demonstrators who had gathered to support Etienne Tshisekedi, the sacked opposition prime minister. Page 4

Madagascar protest off

Madagascar's opposition called off a warning strike launched four months ago to press President Didier Ratsiraka towards political reforms. Page 4

Korean talks resume

Korea's prime minister will travel to North Korea to resume a series of high-level talks aimed at improving relations and easing tensions across the heavily militarised Korean border. Page 4

Ole expels diplomats

Norway has expelled eight staff at the Soviet embassy for "activities incompatible with their diplomatic status", a term for spying. Page 4

Lloyd's of London gets writ from 64 US members

Several hundred individuals and businesses in the Lloyd's of London insurance market were yesterday cited in a writ filed in New York alleging breaches of US securities and racketeering laws.

The allegations, by 64 of the insurance market's US members or Names - the individuals whose assets support underwriting - allege that Lloyd's and its agents broke the law by misrepresenting risks faced by potential investors in the market. Page 22

SIEMENS of Germany is to tighten its control over the ailing Nixdorf Computer company, which it rescued last year, by raising its stake from the present 78 per cent of the combined voting and preference stock to 100 per cent at a cost of nearly DM1.9bn (\$1.1bn). Page 23

LAFARGE Coppée, France's largest cement and construction materials group, plans to continue its expansion in Spain by taking a large stake in Tinsa, a FF1bn (\$170m) per year turnover building products group. Page 23

WARNER, US media and entertainment giant, revealed a \$62m third quarter net loss, compared with a \$91m deficit a year ago. Page 23

SANWA International launched 10 authorised unit trusts in the UK, the first entry by a Japanese institution into the UK unit trust industry. Page 23

MANNESEMAN, German steel and engineering group, is to acquire a 51 per cent stake of the rising shares of VDO Adolf Schindling, a Frankfurt-based manufacturer of instrument systems for cars and aircraft. Page 23

US government is considering cutting taxes for middle-income families as part of effort to stimulate economic growth. Page 7

GRAND Metropolitan, UK food, drinks and retailing group, has bought Greece's leading ozo producer, Kalyannis Brothers, consolidating its presence in the Greek drinks market. Page 30

JAPAN's money supply expanded by a low 2.2 per cent last month, down from a revised 2.7 per cent growth in August, highlighting stock and bond market expectations of a cut in official interest rates this week. Page 4

NATIONAL Westminster Bank, wholly owned US subsidiary of Britain's National Westminster Bank, revealed a third-quarter loss of \$65.7m. Page 23

SKF, world's leading rolling bearings manufacturer, has announced a 95.2 per cent drop in profits (after financial items) for the first nine months of the year to SKr85m (\$13.8m) compared with SKr1.76bn for the same period of 1990. Page 23

CHASE Manhattan, New York City bank that has been hard hit by the real-estate slump, released improved third-quarter results which suggest the bank's restructuring and cost-cutting policy is beginning to pay off. Page 24

From today, the FT-SE Eurotrack 100 index can be found in the panel immediately below this column. The index, launched a year ago, covers 100 leading continental European shares traded on the London Stock Exchange's international marketplace.

Fuller statistics on the FT-SE Eurotrack 100 can be found on the World Stock Markets page each day. Details of the FT 30-share Ordinary Index, formerly carried in the panel below, can be found each day on the London Stock Market page.

Germany is given grim warning on economy

By Quentin Peel in Bonn

GERMANY'S five leading economic institutes yesterday issued a grim warning of the consequences of failure to cut wage demands and government spending for the economy, and above all for the former East Germany.

They made an urgent appeal to the government, employers, trade unions and the Bundesbank to co-ordinate their wages, state spending and monetary policies to avoid worsening inflation and a sharp downturn in the economy.

The plea came in the latest autumn survey of the German economy issued by the five institutes, which reported that the collapse of the vast German economy had bottomed out - but that there was no sign of any sustained recovery. A forecast for 12.5 per cent growth in the coming year was described as nothing more than "a technical correction of the collapse."

Initial government reaction to the survey completely ignored its overwhelmingly gloomy tone, and commended

instead its conclusion that the collapse of the eastern economy had bottomed out. The government spokesman said this proved that the "eastern upswing" had begun, in spite of repeated statements in the document to the contrary.

The institutes' report was particularly outspoken in warning of the consequences of a failure to restrain wage demands in both east and west, and government spending in the west.

The drive for wage equalisation in the east was

destroying the competitiveness of eastern industry faster than any productivity gains could be achieved through new investment, the economists said. The result was that the inflow of private investment was discouraged.

The two growth sectors in the east today - construction and retail trade - relied on public sector finance and the wages boom, respectively. That trend would continue unless incomes were restrained in all but those sectors of genuine labour shortage.

"In east Germany there will be no economy able to develop which is as efficient as that in west Germany, and which offers enough jobs," it said. "Many jobs in the new Bundesländer are not guaranteed in the long term, because they depend on the distribution of state finance."

In addition, the continuing need for public funds to subsidise the eastern economy meant that the tax and social security burden on western workers would remain high and possibly rise further - fuelling

wage demands in the west. The state debt would continue to rise, restricting its own efficiency and burdening the capital market, further increasing the cost of capital.

The institutes called for western employers and unions to keep their deals to a maximum of 4 per cent. That in turn, they suggested, would relieve the Bundesbank of real pressure to cut the money supply further.

Details, Page 3
Editorial Comment, Page 20

Israeli objections to PLO role may block peace talks

By Hugh Carnegie in Jerusalem and Max Rodenbeck in Cairo

ISRAEL'S prime minister warned yesterday that his government still had to scrutinise the list of Palestinian delegates to next week's Middle East peace conference to ensure they met Israeli terms for attending the talks.

Mr Yitzhak Shamir's statement came as Mr Yasser Arafat, chairman of the Palestine Liberation Organisation, stressed the significance of his role in the peace process and his closeness to the delegation representing the Palestinians at the talks.

Israel has said it will not accept any direct role for the PLO.

Mr James Baker, US secretary of state, has assured Mr Shamir that the Palestinian delegation, which is likely to be announced today in Jerusalem, would not contravene Israel's conditions that it should exclude members of the PLO and residents of Jerusalem.

Palestinian statements have exposed the extent to which the Israeli government has been forced to turn a blind eye to the PLO's thinly disguised presence. An irritated Mr Shamir said yesterday of the Palestinian delegation: "We will have to check the names and we will act accordingly."

Israeli officials indicated they did not expect a major upset, but stressed they would stick to their conditions. "The main test will be in the conference itself," an official close to Mr Shamir said. "If we find

ourselves sitting in front of people who are not acceptable to us, then we will leave."

In Cairo, Mr Arafat underlined his primary role in preparations for next week's conference. "Don't forget, I appointed (Faisal) Husseini to head the team of pre-conference negotiators," he told reporters, adding that he expected co-ordination between the PLO and the Palestinian delegation to be "excellent".

However, Mr Arafat was careful not to make any claims of responsibility for the nomination of Dr Haider Abdul Shafi to head the Palestinian group in the talks with Israel.

But Dr Shafi himself told Israel Radio that the delegates would be representatives of the PLO, "in the sense that all Palestinians have allegiance to the PLO, so they are," he said.

Mr Shamir also reacted sharply to reports that the delegation would include up to six members who would not take part in the talks, but would act as advisers. They are expected to include figures Israel has objected to as negotiators, such as Mr Husseini.

"Nobody talked to us about this and we did not agree to this," Mr Shamir said. "This really takes us by surprise."

Mr Arafat yesterday met Egyptian president Hosni Mubarak in an effort to head Arab divisions before the conference. Mr Arafat, who has been shunned by Egypt since he backed Iraq during the Gulf crisis, won promises of Egyptian support for Palestinian demands at the conference, but failed to gain Egyptian assent for a full Arab mini-summit grouping the leaders of Israel's neighbours.

Instead, Syria, Lebanon, Jordan, Egypt and the PLO have agreed to send ministers to talks aimed at co-ordinating Arab strategy which are expected to be held tomorrow in Damascus. In a sign that welcoming the peace conference has not erased Palestinian doubts over what they may gain, the PLO leader described guarantees given by the US as "not sufficient".

Syria and the PLO have agreed to try to persuade the other nations to stay out of multilateral talks on regional issues such as arms control, scheduled to start two weeks after the conference opening, until such time as Israel agrees to give up the occupied territories. Jordan said yesterday it was considering such a stance.

Meanwhile, Mr Shamir said he did not see any danger of his rightwing coalition collapsing because of hardline opposition to the peace talks. A vote on Sunday to leave the government as soon as the conference opens.

However, two other extremist groups say they will only quit if negotiations get as far as the issue of territorial concessions by Israel. Even if they were to do so, Mr Shamir could continue in office with opposition Labour party support.



Lebanese Hassan Hamka embraces his mother after being released with 14 of his compatriots from an Israeli prison at Tyre in south Lebanon

US hostage Jesse Turner released after four years

By Hugh Carnegie in Jerusalem

AMERICAN hostage Jesse Turner was freed by kidnappers in Beirut last night, hours after Israel paved the way for a deal by releasing 15 Lebanese prisoners.

Mr Turner, who had been held since January 1987, was put in the custody of Syrian security officers and was being driven to Damascus to be handed over to US diplomats.

Mr Turner, now 44, was kidnapped on the campus of Beirut University with an American colleague, Mr Alan Stein, who is still being held.

With Mr Turner's release, kidnappers are now holding eight westerners, including four Americans.

Just before his release, the pro-Iranian kidnap group, the Islamic Jihad for the Liberation of Palestine, complained that Israeli bombing had held up steps to free him.

The bombing was part of a flare-up of fighting between Israeli forces and Hizbollah - the Iranian backed fundamentalist group - in southern Lebanon. Israeli jets bombed a Hizbollah base near the village of Jibsheet in retaliation for a bomb attack on Sunday in which three Israeli soldiers died.

Mr Yitzhak Shamir, Israel's prime minister, said the release was one in a series of steps agreed with Mr Javier Pérez de Cuéllar, UN secretary-general, aimed at securing the freedom of all remaining western hostages in Lebanon.

The complex hostage-swap arrangement includes Israel gaining confirmation of the fate of seven missing servicemen in return for the release of more than 300 Lebanese prisoners which it holds.

The UN has made considerable progress towards a settlement of the hostage problem since the release in August of Mr John McCarthy, a British journalist. His release was followed by the freeing of Mr Edward Tracy, an American, and Briton Mr Jackie Mann.

Britain 'gives inadequate support to manufacturers'

By Michael Cassell, Business Correspondent, in London

SOME of Britain's most senior industrialists yesterday criticised its government and banks for failing to support manufacturing industry. They called for a national commitment to help sustain long-term investment in the country's manufacturing base.

They criticised the Department of Trade and Industry for failing to promote the interests of manufacturing and claimed the Treasury and Bank of England were handicapped "by a combination of poor information, lack of first-hand understanding of the realities of manufacturing and an apparent mistrust of outsiders".

In a report prepared by the Confederation of British Industry, the business leaders said the UK government must be prepared to act as the "champion of industry" in the international arena.

"We cannot afford for key exporting industries to lose orders because UK manufacturers in practice receive less support from their government

than major competitors", they added.

They also criticised the short-term attitude towards manufacturing among UK financial institutions. Steps to redress the "imbalance of power" between the banks and smaller manufacturing businesses were called for, as well as an improved climate of understanding between shareholding institutions and larger manufacturing companies.

The report, which is certain to reignite the political debate over Britain's comparatively weak manufacturing performance, claims only "a fundamental shift in attitudes" will allow the UK to compete successfully with other leading manufacturing nations.

Mr John Banham, CBI director-general, said that Britain's manufacturing sector had not been run down during the 1980s. After decades of decline, the UK's share of manufactured exports was again rising.

Even so, Britain's overall manufacturing performance still lagged badly behind that of its main competitors.

He added: "Without a strong manufacturing base, there is not the slightest prospect that the UK will generate the wealth our politicians are competing so wildly to spend."

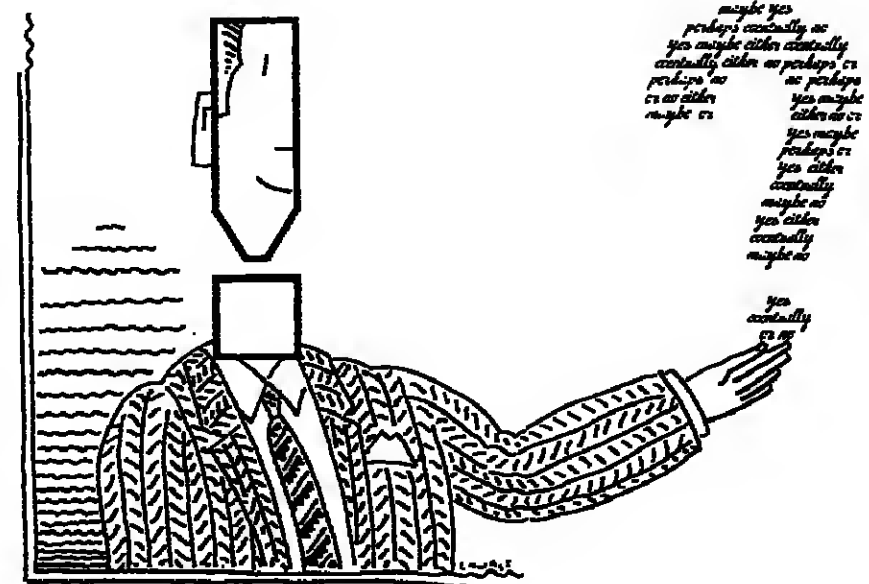
Mr Peter Lilley, trade and industry secretary, brushed aside the more critical passages of the report. He said he shared the CBI's support for manufacturing industry, whose future would depend on its ability to innovate and to provide quality products.

The CBI report did not exclude companies from criticism. It said that while many had achieved world-beating performances, the aggregate figures suggested there were too few of them. The average productivity of the top one-quarter of UK manufacturers was more than five times the average of the bottom quarter.

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Apple sets sights on market for notebook computers

John Sculley (left) chairman and chief executive of Apple, has high hopes that the US computer company's new "Macintosh PowerBook" notebook computers will become the market leader.

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MARKETS

STERLING	DOLLAR	STOCK INDICES
New York lunchtime:	New York lunchtime:	FT-SE 100:
\$1.715	DM1.6823	2,575.7 (-25.4)
London:	FFFr.7895	FT-SE Eurotrack 100:
\$1.719 (1.725)	SPFr.1.4838	1,037.89 (-1.12)
DM2.955 (2.9125)	Y130.7	FT-A All-Shera:
FFFr.915 (9.9325)	DM1.6905 (1.8885)	1,242.48 (-0.81)
SPFr.2.545 (same)	FFFr.5.7575 (5.7575)	New York lunchtime:
Y224.75 (223.75)	SPFr.1.4805 (1.4755)	DI Ind. Av.
£ Index 90.4 (same)	Y130.7 (129.75)	3,055.45 (-21.69)
Gold:	\$ Index 64.8 (64.5)	S&P Comp
New York: Comex Dec	Tokyo close:130.6	389.47 (-3.03)
\$365.9 (364.4)		Tokyo: Nikkei
London:		25,016.31 (+121.99)
\$363.4 (360)		
N SEA OIL (Argus)		
Brent 15-day Dec		
\$22.55 (same)		
Child price charges		
yesterday: Page 23		

EUROPEAN NEWS

EniChem in jobs deal with unions

By Robert Graham in Rome

THE tortuous process to restructure Italy's ailing chemical industry has cleared an important hurdle after a week-end accord between EniChem, the chemicals subsidiary of the state energy concern, Eni, and the unions.

The accord allows EniChem, this world's ninth highest chemicals group, to go ahead with a 1.8,200bn (\$2.77bn) four-year business plan in limbo for almost six months. But the company has had to water down job losses and prolong the life of some plant, after pressure from unions and government worried about continued industrial unrest if the company persisted with its original job-cut proposals.

EniChem already has 5,000 workers laid off and had planned a further 2,800 lay-offs out of the 44,000 work force. It has now accepted to retain an extra 450 workers and ensure that 3,000 of those laid off will go into early retirement. It has also agreed to delay closure of its acrylic fibres plant at Villacidro, Sardinia, and ensure that workers at the loss-making fertiliser plant at Crotone, Calabria, will find alternate employment. It will also seek means to sustain the fertiliser plant at Gela in Sicily.

These measures are timid compared to restructuring by EniChem's international competitors. But the union deal reflects EniChem's continued socio-economic role in the south, which the politicians are reluctant to alter. The plan aims to rationalise fertiliser capacity, emphasise core business by exploiting EniChem's petrochemicals plant, and move into products with higher added value. The union accord should help the search for a partner to exploit EniChem's polyethylene capacity.

German 'wise men' see no rising star in east

THE COLLAPSE of the former East German economy has ended, but there are no signs of any sustained recovery yet, according to the five leading German economic institutes.

Their annual economic survey is extremely cautious throughout in its prognoses, especially on the east. It is sharply critical of a range of policies instituted by the federal government, the Treuhand agency responsible for privatisation, and the local authorities in the so-called "new Bundesländer".

At the same time, it recognises that many of the reasons for the collapse of the eastern economy in the year after unification have been inevitable and irresistible.

In the first place, the wise men of the institutes forecast a 10 per cent recovery in eastern economic output next year, but they stress repeatedly that this cannot be seen as the beginning of a sustained upswing.

"It is more like a technical recovery after the collapse, rather than anything more substantial," according to Dr Helner Flassbeck of the Berlin-based German Institute for Economic Research.

"Evidence of a broadly based, sus-

tained economic recovery, in whose wake would come rising demand for labour across the whole east German economy, is simply not yet to be found," the survey says. "The most recent slight reduction in unemployment cannot in any way be seen as a turning point for the development of activity, but as evidence of the massive application of labour market support measures."

Current unemployment, which stood at 1.03m in the east in September, is less than feared, but greatly understates the extent of adjustment over the past two years. Since the end of 1989, the number gainfully employed in the east has dropped by as much as 3.5m from almost 10m.

Those losses, from the complete closure of swathes of public sector jobs required under the old central plan - for example in trade and supply organisations - and from over-employment throughout productive industry, have been disguised by a variety of factors.

They include large numbers on short-time working, involved in job-creation (*Arbeitsbeschäftigung*) schemes, taking early retirement, and commuting to the west.

The economic collapse is over in former east Germany, writes Quentin Peel, but there is no sign yet of sustained recovery

The survey forecasts a further increase in unemployment to a peak of around 1.5m next summer, but still falling short of the most gloomy estimates of up to 2m-3m, which circulated at the time of unification.

The economists point to very erratic performance of the different sectors in the eastern economy, and warn that the easiest options for privatisation may have been exhausted. Thus privatisation of small shops, bars, restaurants and guest-houses (but not hotels) has been virtually completed, but is still modest to the slow sales of land, the slow privatisation of agriculture, and the excessive expectations for a rapid recovery in east German industry.

By the end of September, the Treuhand had privatised some 3,800 enter-

prises in the industrial and commercial fields, but 40 per cent of them were in services, construction, agriculture and forestry. It is still extremely difficult to assess the success or failure of the operation, the authors say.

Thus the Treuhand cites a figure of DM355bn (\$29.3bn) in promised investments under its sales contracts, with 720,000 jobs guaranteed. A further 2m are employed in enterprises still under Treuhand control which, the institutes fear, may prove more difficult to privatise, because the most attractive enterprises have been sold first.

If all the energy investment is taken out of the figure, it falls to DM55bn, or some DM60,000 per job, spread over several years, they say. If vehicle manufacture is taken out, the figure falls to DM60,000 per job. "In the light of the very high restructuring needs of businesses in east Germany, that seems far too little," the survey says.

The authors go on to criticise the slow sales of land, the slow privatisation of agriculture, and the excessive expectations for a rapid recovery in east German industry.

In manufacturing industry, the survey notes the relatively optimistic forecasts of the new eastern businesses. A majority surveyed by two of the institutes in recent weeks expect a significant recovery in the second half of the year. But the authors warn that most Treuhand-supervised businesses failed to achieve their turnover forecasts in the first half.

Three-quarters expect to be competitive within two years - and yet their answers betray a lack of awareness of the competitive pressures, including their failure to adapt their products for western markets. The outlook, the survey says, is particularly unfavourable for the electrical, machine engineering, textiles and chemical industries.

The survey reserves its grimmest warning for the effect of the pressure to raise eastern wages to a western level in a very short period.

This could undermine the competitiveness of large areas of eastern industry, leaving only islands of higher productivity created by western investment, and distorting the economic basis of the eastern economy for years to come.

Finns take steps to cut cost of labour

By Enrique Tessieri in Helsinki

FINLAND'S employers and unions yesterday agreed a two-year deal which will cut labour costs by 6.9 per cent.

Under the agreement, to run from next January to October 31 1993, the labour savings will take the form of a 3.3 per cent cut in employers' social security payments, a 3 per cent cut in employees' wages and holiday bonuses, and a 0.6 per cent cut in the amount paid annually as an age increment.

Finland is in severe recession and faces record unemployment and bankruptcies this year as well as high labour and production costs.

In order to lower the cost of living, the government yesterday promised anti-trust laws and relaxed import restrictions to enhance domestic competition, especially in agriculture; and more housing subsidies to bring down rent and property prices. A central bank official said the agreement should help cut inflation from around 4 per cent this year to 1 per cent in 1992.

Serbs close ranks against EC constitutional plan

By Laura Silber in Belgrade

SERBIA'S president, Mr Slobodan Milosevic, is supported by opposition parties in the republic in rejecting the constitutional plan for Yugoslavia presented by the European Community in The Hague last week.

Montenegro, normally a close ally of Serbia, accepted the document because its population is mostly contained within its own borders and it did not thus fear the consequences of independence.

But Serbia ruled out the plan, which calls for an association of independent republics, because 2.5m Serbs live in neighbouring Croatia and Bosnia-Herzegovina.

"The proposal... takes into account the Slovene and Croat aspirations for independence but leaves 2.5m Serbs who live outside Serbia's borders as a national minority in an independent Croatia and Bosnia-Herzegovina," said Mr Dragoljub Micunovic, leader of the centrist Democratic Party.

The proposal, which was loosely based on the same prin-

Spurious battles flared in Croatia yesterday despite a ceasefire. The rebel republic's radio said a "cataclysm" of fighting had damaged beyond recognition four tourist towns near Dubrovnik, Reuters reports.

Cold and rain tempered fighting on some fronts but the Yugoslav army and Croatian forces fought mortar and artillery duels in Nova Gradiska and Novska in central Croatia and around Vukovar in the northeast, Tunj news agency said. Nine deaths were reported.

Principles as the EC charter, does not take into account the de facto changes in Croatia's borders caused by Serbian invasions since Slovenia and Croatia declared independence in June.

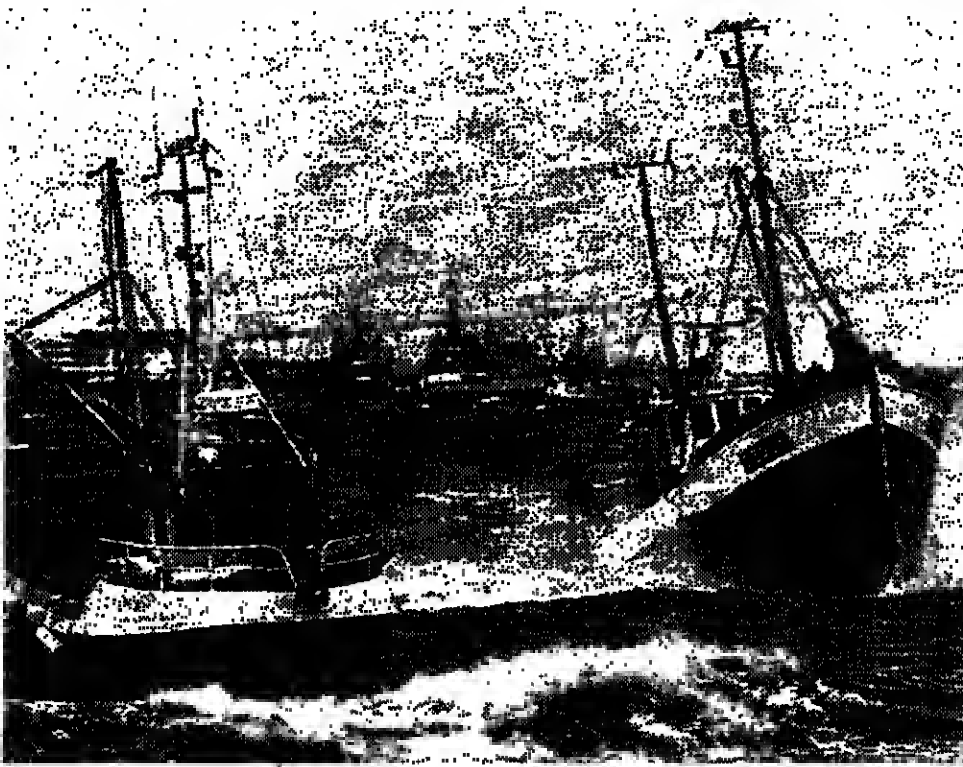
"The Serbs, who believe they are fighting the continuation of the Second World War, refuse to contemplate an independent Croatia. Their armed uprising in Croatia over the past few months shows that this refusal

is not political posturing.

Serbia under Mr Milosevic's authoritarian rule appears ready to risk international isolation, because the alternative for him would have been political suicide. If he had accepted the document there could well have been violent protests among the Serbs in Bosnia and Croatia. This might even have led to his replacement by a still more nationalist and uncompromising leader. Among the most likely contenders would be Mr Vojislav Seselj, an ultra-rightwing leader who runs his own private army.

Mr Micunovic hopes the EC will now offer what moderate Serbs would see as a more feasible option - putting more emphasis on regions defined by ethnic groups, who would be given political autonomy but united by a common market.

He adds: "If Serbia were more democratic and represented by someone less demonised and hated than Milosevic, then the EC would probably have paid more attention to the Serbian argument."



SEVERAL hundred fishing boats blocked Norwegian ports for a second day yesterday in protest against any move to give European Community fishermen better access to their waters. AP reports from Luxembourg. Fishing quotas were one of the issues the 12 EC and

seven Efta nations were trying to agree yesterday as they struggled to finalise an ambitious free trade accord. Some progress was reported, but the talks have dragged on for 16 months and yesterday's session was seen as a last-ditch bid to salvage them.



EUROPEAN NEWS

Italy's unions in show of force over spending cuts

By Robert Graham in Rome

ITALIAN industry and public services will be paralysed today by a four-hour general strike called by the country's three main union federations in protest at public spending cuts proposed in next year's budget.

The strike is going ahead despite concerted efforts by the government to appease the unions and several changes already made to the budget presented on September 30. The government has halved the increase in prescription charges, one of the most unpopular items.

The strike is being exploited by the unions to demonstrate their muscle at a time when the government is under increasing pressure. They are involved in tough talks with government

Italian plan for oil tax spin-off for third world

By Haig Simonian in Milan

A FIFTH of the new oil tax proposed by the European Commission should be diverted to energy projects in developing countries and eastern Europe, Mr Giorgio Ruffolo, the Italian environment minister, said yesterday at an international conference on energy technologies.

The controversial \$10-a-barrel oil levy, which is expected to raise around \$80bn a year from EC member states, will be used exclusively to fund international research into saving energy, under the Commission plans.

Under the Ruffolo scheme, presented at the opening session in Milan of an international conference on environmentally sound energy technologies, 80 per cent of the proceeds would go to finance transfers of energy-saving technology to developing countries. The move, he said, would also help curb increases in "greenhouse" gas emissions and bring the amount of aid distributed to the third world to internationally agreed levels.

Mr Ruffolo later said his initiative had already received a sympathetic reception from fellow EC environment ministers meeting last week.

The idea will be taken up again at a joint meeting of EC environment and industry ministers in December.

The Milan conference, part of a series of international meetings being held ahead of next year's World Environment Conference in Rio de Janeiro, has brought together around 250 international specialists in energy and environmental issues.

The Commission's proposed oil tax, which has been welcomed by some environment ministers, has had a mixed reception from other government departments.

Speaking in Milan yesterday, Mr Guido Bodrato, the Italian industry minister, said that the scheme would only be acceptable if it covered all developed countries and all energy sources, not just oil, as it was necessary to prevent distortions in international competition.

The Soviet Union's revamped parliament meets for the first time

New faces appear in the old club

By Leyla Boulton in Moscow

"A GREAT club with a good buffet" was how Mr Vladimir Lukin, a Russian deputy, summed up the emaciated Soviet parliament which convened for the first time yesterday.

It was not just the linoleum in the smoking room which had been replaced. The Supreme Soviet's very composition and role had changed. New faces, such as Mr Sergei Shakhrai, a leading reformer in the Russian parliament, showed up for the first time, while old-timers, such as Colonel Viktor Alksnis, co-chairman of the once-influential conservative Soyuz (Union) group, were reduced to the role of observers.

The main attraction of yesterday's proceedings was President Mikhail Gorbachev, who said the parliament was a constituent assembly with a mission to "decisively advance democratic reforms in all directions".

The highlight of his speech was a warning to republics such as the Ukraine against trying to take over the Soviet Union, while the Lega del Ticinese, a newly founded populist party in the Italian-speaking canton, had secured two places.

To the left of the coalition the Greens had increased their representation from nine to 12. Switzerland's legendary political stability has been preserved but the four-party coalition has seen its dominance cut from 159 to 146 in the 200-member lower chamber.

Within the coalition, the conservative Radicals managed to



Gorbachev in parliament yesterday: the assembly has a mission to advance democracy, he said

lature until the shape of the future Soviet Union is decided, it is made up of two chambers chosen and controlled by the republics.

But it is already a casualty of the gradual break-up of the Soviet Union, since only seven of the 12 Soviet republics sent delegates. Azerbaijan and Moldova dispatched observers. The Ukraine, Georgia, and Armenia boycotted it altogether.

Mr Sergei Alexeev, chairman of the Constitutional Compliance Committee (the closest thing to a Soviet constitutional court), said the parliament's role would be to "stabilise" legislation and eliminate discrepancies between Soviet and republican legislation which previously paralysed the country.

Although the old centre is dead, there is still a need to eliminate old legislation which serves no purpose or is harmful - and there may even be room for new common legislation to help usher in a new union if that materialises.

"The transition away from the old Communist system must be achieved in a civilised manner," said Mr Yuri Afanasyev, a historian and leading radical deputy.

"If it serves this purpose, then the parliament will play a constructive role. If it tries to play some sort of super-national role, higher than states, then it will be a shameful phenomenon."

Court rejects probe appeal by Goodman

By Tim Cooney in Dublin

THE DUBLIN High Court has rejected an appeal by lawyers for Goodman International, Europe's largest beef processor, to limit the scope of an inquiry into the Irish beef industry.

The private company, headed by Mr Larry Goodman, is the principal focus of an investigation by a parliamentary-appointed tribunal which was set up last June, following allegations of fraud and malpractice in the beef industry.

Lawyers acting for Mr Goodman and his company argued that the tribunal was unconstitutional and that airing the accusations in public would prejudice the possibility of a fair trial, should any formal charges be made. High Court Judge Declan Costello rejected the appeal saying that the powers of parliament to carry out investigations of public importance would be severely curtailed were to be ruled in the company's favour.

A spokesman for the company said yesterday that it intended to appeal against the ruling in the Supreme Court.

Plea to Kohl on office equipment factories

By Chris Parkes in Bonn

LAST-DITCH appeals from unions and local authorities yesterday raised slight hopes of a reprieve for workers at the Olympia and Triumph-Adler office equipment factories in Wilhelmshaven and Frankfurt.

The Baltic city of Wilhelmshaven asked Chancellor Helmut Kohl to intervene personally to save the AEG subsidiary, Olympia, which is due to cease trading at the end of the month, after years of losses.

Some 2,700 of the company's 4,000 workers are employed in and around the town.

The loss of these jobs, coupled with planned cuts in the German navy, would send local unemployment soaring from the present level of 15 per cent to 28 per cent and cause "chaos" in the region, officials of the port city have warned Mr Kohl.

The Olympia supervisory board said later, without giving any further details, that it would put forward a plan on Friday "to secure the future of the Olympia name".

The AEG management recently turned down a proposal that the Wilhelmshaven local government should take a majority stake in its loss-making subsidiary.

In Frankfurt, Mr Giuseppe Giacobbe, managing director of Triumph-Adler, a subsidiary of Olivetti, suggested that new jobs could be created for about 200 of the 650 people who are threatened with redundancy there.

The powerful IG Metall union has been campaigning vigorously against the planned closure.

During more than three hours of talks with the union yesterday, Mr Giacobbe proposed replacing the existing factory with a smaller plant, which would assemble lap-top computers and supply plastic parts to other Olivetti subsidiaries.

Mr Heinz Bierbaum, a local union leader, said that the offer was "not an acceptable alternative". However, he added that the offer in itself "shows there is some movement".

Swiss voters serve notice on government

By William Duffell in Geneva

THE SWISS have served a warning on the centre-right coalition that has governed them since 1959 by voting in larger numbers than expected for extremist groups in last weekend's general election.

With only a few votes left to be counted yesterday, the Auto party, which campaigned in the German-speaking region for tougher curbs on immigrants, had increased its representatives in the lower chamber from two to eight.

In recent months there have been several arson attacks on houses harbouring immigrants. The Swiss Democrats, another anti-immigrant group, had won five seats, two more than they held in the current parliament, while the Lega del Ticinese, a newly founded populist party in the Italian-speaking canton, had secured two places.

To the left of the coalition the Greens had increased their representation from nine to 12. Switzerland's legendary political stability has been preserved but the four-party coalition has seen its dominance cut from 159 to 146 in the 200-member lower chamber.

Within the coalition, the conservative Radicals managed to

retain their position as the biggest party but saw their number trimmed from 51 to 44. The Christian Democrats also suffered a setback, losing six seats, reducing their representation to 36.

Late-reporting cantons deprived the Social Democrats of their early gains; with the possibility of one more seat still open they were stuck at the 41 they had held in the outgoing legislature.

The fourth member of the coalition, the People's Party, had retained its 25 seats.

As the swing to the right among voters became evident,

re-elected members of the coalition renewed calls for a revision of the system by which the seven-man federal council (government) has been elected and has conducted its business for the past 30 years.

If the immigration issue and dissatisfaction over inflation, the housing shortage and high health costs appear to have been the main factors behind the switch in votes, there have also been complaints about the government's incapacity to agree a clear policy on future relations with the European Community.



Are you surprised at how little high level nuclear waste has been produced?

A lot of people are.

There seems to be a general feeling that acres and acres of it are lying around, barely secured, with a radioactive life of thousands of years. Or that tons of it are being dumped at sea every year.

Nothing could be further from the truth.

At British Nuclear Fuels we are spending over £2 billion on a programme which allows us to continue dealing safely and carefully with nuclear waste.

A major misconception is that all nuclear waste is the same. Not true. In fact, it falls into three distinct types which emit varying intensities of radiation.

Consequently, they are dealt with in completely different ways.

The most radioactive is **High Level Waste**, which results from reprocessing spent nuclear fuel. We can recycle at least 97% of spent fuel into new fuel. It is the remaining 3% waste that must be carefully dealt with.

At present, high level waste is stored as a liquid inside double-walled, cooled stainless steel tanks enclosed in thick concrete walls.

However, we have brought into operation a process called 'vitrification', in which liquid waste is converted into glass and sealed inside stainless steel containers to be kept safe for the indefinite future. This method reduces the waste to 1/5 of its original volume. Or, to look at it another way, all the high level waste produced at Sellafield in the last 30 years could be contained in just 4 double-decker buses.

A far less radioactive type of nuclear waste, known as **Intermediate Level Waste**, occurs when the nuclear fuel rods are stripped in the first mechanical stage of reprocessing.

The scrap metal, sludge and residues that are involved in this operation are sealed in cement inside stainless steel drums, and stored in our special encapsulation plant until a suitable long-term home has been found.

The least radioactive waste of all however is **Low Level Waste**, such as paper towels, gloves, protective clothing and laboratory equipment which not only come from the nuclear industry but from hospitals, research laboratories and other industries where radioactive materials are handled.

Despite the fact that radiation from low level waste is negligible, we take no chances.

At Drigg in Cumbria, we have built and use a concrete vault the size of a dozen football pitches, and we are developing a method of compacting this type of waste which means Drigg won't be full until well into the 21st Century.

Intensive investigations have been carried out at sites at Sellafield and at Dounreay in Scotland to assess their suitability as a deep underground repository for intermediate and low level radioactive waste. Sellafield has been chosen as the site at which further investigations will be concentrated.

If you'd like to know more about the way we manage nuclear waste, write to British Nuclear Fuels, Information Services (B), Risley, Warrington WA3 6AS for our nuclear waste brochure.

Better still why not come and visit us at the Sellafield Visitors Centre in West Cumbria.

You could take a bus ride around the site.

BRITISH NUCLEAR FUELS
Managing waste at Sellafield.

INTERNATIONAL NEWS

Hanoi accepts forced return of 250 refugees

By Angus Foster in Hong Kong

THE FULL repatriation of all Vietnamese boat people from Hong Kong who do not qualify as genuine refugees moved a step closer yesterday when Vietnam agreed to take back a small number of boat people, even if they do not want to go.

However, Vietnam is unlikely to agree to widen the scope of the agreement before the first flight of boat people is sent home, probably in mid-November.

This follows an announcement yesterday that Vietnam is prepared to accept the forced return of about 250 "double backers", people who have left Vietnam twice, and their families. The decision clears the way for Hong Kong to implement the first forced repatriation since 1989, when the colony was widely criticised, mainly by the US, for sending back 61 people against their will. This time US criticism is expected to be muted.

The agreement fell short of expectations because it does not address the more sensitive question of the almost 20,000

boat people in Hong Kong classified as economic migrants and therefore not eligible for resettlement in the West. Some of these boat people have been in Hong Kong for three years or longer and are likely to resist with force moves to send them back.

But government officials described the agreement on double backers as the "first step" and were confident of further agreements in the next few weeks. They said Vietnam remains committed to accepting all non-refugees but is cautious about the pace of returns.

Hong Kong also hopes the agreement, although limited, will persuade more boat people to return voluntarily rather than face possible forced repatriation. A forced return of boat people could also dissuade more people from leaving Vietnam.

Vietnam first indicated it was prepared to accept forced repatriation during talks in September. British officials believe Vietnam wants to solve the boat people problem to

improve its ties with Asean neighbours following the expected signing of the Cambodian peace accord tomorrow in Paris.

The agreement was expected last week but was delayed following internal differences within the Vietnamese government and worries about the logistics of receiving and resettling thousands of boat people. During talks last week in Hanoi, one option to announce full agreement and then iron out details was shelved and a decision made to move ahead step by step.

Under the agreement Hong Kong will give Vietnam two weeks' notice of the names of returnees. Hong Kong is expected to deliver a list of names to the Vietnamese soon and will try and persuade the double backers and their families to volunteer rather than be forced home.

The next obvious category for forced repatriation will be recent arrivals because these people have not been subjected to peer pressure.



Vietnamese boat people arrive in Hong Kong. Vietnam has agreed to allow forced repatriation in some cases

Britain remains the odd man out

By Robert Mauthner and Michael Holman in Harare

BRITAIN yesterday remained the odd man out on South Africa in spite of a more moderate Commonwealth stance on the lifting of sanctions.

The final communiqué of the six-day Commonwealth heads of government conference reflected efforts to reach a consensus, but the gap that remained over the issue was underlined in a paragraph setting out the British position.

In contrast to the rancour and controversy that has marked successive Commonwealth conferences over the past decade, the Harare meeting succeeded in healing many of the wounds left by the clashes between Mrs Margaret Thatcher, the former prime minister, with her partners over South Africa.

The combination of progress towards a peace settlement in South Africa and the more conciliatory approach of her successor, Mr John Major, helped create a remarkably cordial and constructive climate.

In Harare, Commonwealth leaders who welcomed the important changes that had taken place in South Africa in the last 20 months unanimously agreed to lift so-called "people to people" sanctions immediately. These include consular and visa restrictions,

cultural and scientific boycotts and bans on tourist promotion and direct air links.

They also agreed that the UN arms embargo should stay until a democratic post-apartheid government was established. Unanimous agreement was not possible, however, on the timetable for lifting financial sanctions, such as access to IMF and World Bank resources, and trade and investment sanctions.

Britain, however, which has already resumed normal trade and investment ties with South Africa, stressed that it was dissatisfied with the pace at which its partners proposed to lift sanctions.

Britain did, however, succeed in softening the terms recommended by the Committee in New Delhi last month and which served as the basis for discussion at the Harare conference. The communiqué states that trade sanctions should be lifted "when appropriate transitional mechanisms had been agreed which would enable all the parties to participate fully and actively in negotiations."

Financial sanctions, the communiqué continued, should be lifted either "when agreement is reached on the text of a new democratic constitution" or "by agreement at South Africa's all-party conference or by an interim government." The original draft did not offer the second and third options.

UK premier defends declaration

By Robert Mauthner and Michael Holman

MR John Major, the British prime minister, yesterday made a spirited defence of the Commonwealth declaration of principles issued on Sunday, and rejected claims that its pledges on democracy and human rights would prove to be ineffectual.

"I think it [the declaration] is a mixture of carrot and stick," he said. "All the member governments had put their name to matters that collectively came under the term of good government, even if the term itself was not used."

Mr Major said there had been "a rebirth of democracy around the world", but admitted the declaration did not provide for any obvious mechanism for enforcing pledges on democracy and human rights.

The force of "peer pressure" and the extent to which countries were increasingly interdependent would have a big influence on countries which fell short of the principles adopted.

He underlined the unanimous agreement reached by the heads of government on the need for a successful outcome of the Uruguay Round of trade negotiations. "Failure would be an absolute hammer blow for the developing countries. The cost to them of protectionism in the industrial world currently exceeds the total value of aid they receive from the industrial world."

Japanese markets expect rate cut

By Robert Thomson in Tokyo

JAPAN'S money supply expanded by a low 2.2 per cent last month, down from a revised 2.7 per cent growth in August, heightening stock and bond market expectations of a cut in official interest rates this week.

The low growth reflects the continued slowing of economic activity in Japan, and intensified the debate between the Bank of Japan and political and industrial leaders, who fear that companies are being

starved of funds and that the economy is in danger of stalling.

But the Bank of Japan said the decline was partly explained by the transfer of funds from bank accounts to postal savings accounts, which are outside the M2 plus certificates of deposit measure, and by a slowdown in bank lending.

It said that banks have money to lend, but companies have used other sources,

including cash reserves, to fund their investments.

Central bank officials have argued in recent days that there is no need for a change in monetary policy, but the release of the money supply figures yesterday prompted Japanese politicians and industry leaders to call for an immediate reduction in the official discount rate (ODR), which stands at 5.5 per cent.

Mr Russell Jones, senior economist at UBS Phillips &

Drew, said that the flow of money into postal savings, which offer higher interest rates, naturally increases when market rates fall. He said these transfers have exaggerated the slowdown in money supply expansion.

"The low growth is not a threat to economic health at the moment, but it is becoming a threat. It has just about reached the stage when the bank will need to do something," Mr Jones said.

Korean talks restart as nuclear fears mount

By John Ridding in Seoul

MR Chung Won Shik, South Korea's prime minister, will travel to North Korea today to resume a series of high level talks which are aimed at improving relations and easing tensions across the heavily militarised Korean border.

They come at a time of growing concern about North Korea's nuclear programme and increasing economic and diplomatic pressures on the North Korean regime.

The talks, which have been postponed from February this year and which will be held in Pyongyang, are the fourth in a series of meetings between the prime ministers of the two countries.

"We are hopeful for progress," said Mr Lee Dong Bok, special assistant to the prime minister and a member of the South Korean delegation.

"North Korea is under unusually heavy pressure to change and we have been preparing a very flexible position on most of the outstanding issues," he said.

But western diplomats in Seoul said that they expected little progress on the issue of North Korea's nuclear programme, the subject of greatest concern. South Korea and its allies believe that North Korea will be able to produce a nuclear device by the middle of the decade.

Religious tensions grow in Ayodhya row

By David Housego in New Delhi

TENSION between Hindus and Muslims in northern India rose sharply yesterday as Hindu militants embarked on the final phase of their campaign to build a new Hindu temple at Ayodhya on land claimed by Muslims.

Leaders of the Vishwa Hindu Parishad (VHP), the Hindu crusading movement, took part in religious ceremonies at Ayodhya in Uttar Pradesh intended to mark the beginning of construction.

At the same time Mr Ashok Singhal, the VHP leader, made what he called a "last appeal" to Muslims to hand over voluntarily the 16th century Babri mosque that stands in the way

of the completion of the temple.

The controversy over the temple has become the most divisive issue in Indian politics. In recent days minor temples and buildings close to the mosque have been pulled down preparatory to construction work beginning.

Muslim organisations yesterday condemned the state government's compulsory acquisition of the disputed land and warned that demolition of the mosque "will tear the fabric of our secular society".

Over the past two years, the dispute has provoked widespread rioting and bloodshed.

Zaire slides towards chaos

By Julian O'Zanne in Nairobi

PRESIDENT Mobutu Sese Seko's continued sabotage of attempts to install a credible government to pull Zaire out of severe economic and political crisis threaten to plunge the country back into violent upheaval.

Troops of the elite presidential guard yesterday fired tear gas and shot into the air to disperse thousands of pro-democracy demonstrators who gathered to support Mr Etienne Tshisekedi, the sacked opposition prime minister, in his failed bid to enter his office.

The tussle between the two

men came after state-run television yesterday carried Mr Mobutu's official decree dismissing Mr Tshisekedi - the man he was forced to name as prime minister after riots and looting last month wrecked the capital Kinshasha and left 350 people dead.

Amid signs of growing tension yesterday, soldiers set up roadblocks and checkpoints on roads leading into the city and blocked access to embassies where demonstrators tried to take refuge.

Western diplomats believe an opposition-led interim gov-

ernment with substantial powers wrested from the president is the only hope to prevent the country slipping towards chaos.

France and Belgium, who still have paratroops in Kinshasha, have made it clear to Mr Mobutu that such a government is a pre-condition for their support and assistance.

Yesterday's move by Mr Mobutu, after three weeks of political impasse, suggest any optimism the president was willing to share power in the interests of national unity and stability has been ill-founded.



Mobutu: intervention

South African ore for Japan

JAPANESE steel companies ended their "self-restraint" in trade with South Africa by signing an iron ore import contract in advance of today's announcement that Tokyo has lifted economic sanctions against Pretoria, reports Nikko Terasono from Tokyo.

Nippon Steel, the largest Japanese steel maker, said it and five other companies - NKK, Kawasaki Steel, Sumitomo Metal Industries, Kobe Steel and Nishin Steel - have finalised a five-year ore contract.

Environment agencies start to flex their muscles

John Hunt on some far-reaching proposals on population control, energy conservation and pollution

AN INTERNATIONAL plan was unveiled yesterday to "harness the total resources of humanity" to improve the global environment by measures which include massive reductions in energy consumption and the use of natural resources in industrialised countries.

The proposals, put forward by the United Nations Environment Programme (UNEP), the world conservation union (IUCN) and the World Wildlife Fund (WWF), envisage the establishment of a new world organisation - probably based on the United Nations - to co-ordinate environmental protection and encourage sustainable development which does not deplete natural resources.

The report, entitled "Caring for the Earth," suggests that the UN general assembly could co-ordinate the system through its committees and produce annual reports on the state of the world environment.

It calls for a global alliance of governments committed to a "universal declaration" on sustainable growth and environmental protection which would be signed by all countries by the year 2000. The alliance would have the backing of

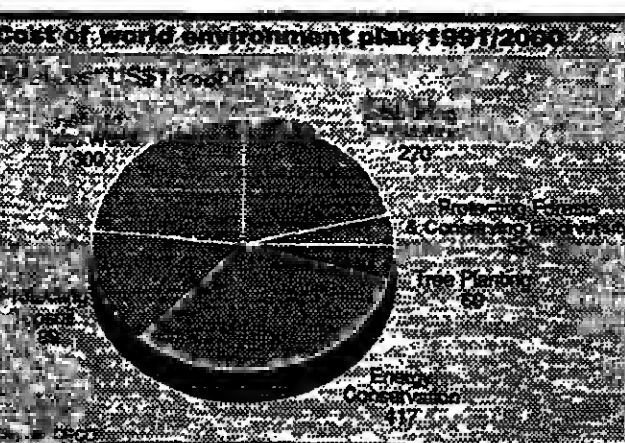
business and industry, religious leaders and citizens' groups.

Launching the report in London, the Duke of Edinburgh, president of the WWF, warned that unless population growth was halted soon world resources would no longer be able to support humanity's needs and economies would face collapse.

The report was given the backing of the UK government by Mr Tony Blair, junior environment minister, and was also endorsed by Mr Neil Kinnock, the Labour Party leader, and Mr Paddy Ashdown, leader of the Liberal Democrats.

The result of three years' work by scientists and conservationists, it was launched simultaneously yesterday by national leaders and public figures in 65 cities throughout the world including London, New York, Paris, Bonn, Tokyo, Moscow and Beijing.

A programme costing \$1,288bn (£745bn) over the next decade is proposed and would involve increased aid for developing countries and measures to curb population growth. The cost would partly be met by a switch from world military spending currently estimated at \$600bn a year.



The report contains over 130 proposals and is intended to influence politicians attending next June's "Earth Summit."

"The resources of the planet are already over-stressed," said Mr Charles de Haes, director general of WWF International. "Governments must act but they will only succeed with their peoples' support."

With regard to energy and raw materials, the proposals urge high energy use countries to reduce per capita energy consumption to 80 gigajoules a year. This would mean huge reductions in energy use by the US (currently 280 giga-

joules) and Britain (now 150 gigajoules). They should reduce energy consumption by one per cent a year until the end of the century and two per cent annually afterwards.

Those with consumption at or just below 80 - such as Israel and Venezuela - or far below this level, such as China and Bangladesh, should not exceed it as they industrialise further.

High consumption countries should introduce economic incentives and taxes to encourage economy in energy and raw materials and abolish subsidies that distort resources

prices. "Taxes on raw materials could be set similarly to encourage more efficient technologies, more use of renewable resources and more durable products," the report states.

On economic measures, the report suggests that environmental quality and natural resources should be properly valued in national accounting in order to achieve sustainable development. There should be a "true statement" of national income showing depreciation or preservation of natural assets.

Individual companies should commit themselves to sustainability and environmental excellence and the minimisation of raw material and energy use. They should disclose the results of environmental monitoring of their activities and not use commercial confidentiality to frustrate the release of information.

Charges for polluting the atmosphere should be higher than the cost of removing that pollution. The report believes this would "motivate industry to prevent pollution and promote development of anti-pollution technology."

The report says that since the mid-18th century the con-

UK group loses Kuwait deal to US rivals

By Victor Mallet, Middle East Correspondent

A CITY of London consortium bidding to advise Kuwait on claiming compensation for Gulf war damages has lost the lucrative contract to two American rivals, including the US affiliate of one of its own members.

The City Kuwait Group (CKG), which included accountants KPMG Peat Marwick of the UK and lawyers Clifford Chance of London, was beaten when Kuwait awarded separate contracts to KPMG Peat Marwick of the US and the American lawyers Cleary Gottlieb Steen and Hamilton.

Lord Limerick, CKG chairman and former head of the British Invisibles Group, speaking at a conference in London yesterday on Kuwait's future, expressed disappointment that the Kuwaiti government had not adopted the group's package for dealing with Kuwaiti compensation claims to be presented to the United Nations.

Privately, CKG members are bitter that they lost the contract - worth tens of millions of dollars - despite British political support from the prime minister's office, and are outraged at the involvement of KPMG Peat Marwick of the US. "It caused an unholy row,"

Mr Hammond al-Bogha, the Kuwaiti oil minister, said yesterday that the last 58 of the 732 wells set ablaze or destroyed by Iraq during the Gulf War would be capped by early November.

said one lawyer yesterday. "All the people involved were absolutely furious."

Members of CKG say that KPMG Peat Marwick in London is embarrassed by the outcome because it was apparently not aware of the approaches being made to Kuwait by its US sister organisation until late in the day.

Mr Bruce Bingham of KPMG Peat Marwick in New York yesterday described the US and UK arms of the firm as "separate partnerships" and confirmed that the US partners would be establishing neighbourhood offices in Kuwait to process claims.

Although they have lost the chance to sell a consolidated compensation plan to the Kuwaitis, the various loss adjusters, financial and legal experts making up the CKG are still hoping to work on peripheral Kuwaiti contracts or are already doing so.

They are particularly disappointed at losing the bulk of the compensation - work because Sheikh Saad al-Sabah, the Kuwaiti Crown Prince, and Sheikh Ali Khalifa al-Sabah, the then finance minister, were enthusiastic when Lord Limerick first presented the proposal to them in April.

Thereafter Sheikh Ali was dropped from the Finance Ministry and the Kuwaiti government decided to distribute the compensation work to different groups. Rivals of the CKG suggested its package was too expensive.

British businesses have lost visible as well as invisible trade in Kuwait after a promising post-war start. Delays in finalising a contract for a British oilfield freighting consortium known as the Kuwait British Group (KBG) has already cost the group part of the freighting component of its work.

ROYAL OPERA HOUSE

CANCELLED PERFORMANCES

The Royal Opera House announces with regret that because of a wage dispute with the Orchestra of the Royal Opera House all performances by The Royal Opera and

The Royal Ballet at the Royal Opera House have been cancelled until further notice. The Royal Opera House apologises for the disappointment and inconvenience that this will inevitably cause and hopes that it will not be long before a solution to the dispute can be found. The Box Office will continue to take forward bookings on the understanding that money will be refunded if the House remains closed.

REFUNDS

Full refunds on the face value of tickets are available once the performance date has passed. Refunds can be claimed on presentation of tickets in person at the Box Office or by returning the tickets by post to:

Refunds, Royal Opera House,
Box Office, P.O. Box 6, London WC2E 7QA

Tickets purchased by credit card will be credited to the card-holder's account.

Further information on
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How can exporters reduce their currency risks without turning their businesses upside down?



Risk management is not everyone's forte. Surprises may occur that can turn a company topsy-turvy. One thing is certain: standard solutions and all-out efforts aren't enough. Systematic, well-planned investment programs are necessary. And this is where the UBS Institutional Asset Management staff comes in, with its specialized know-how, international experience and Union Bank's excellent global connections. For example, UBS Institutional Asset Management can help

reduce your currency risks. An analysis of your specific currency exposure provides the basis for effectively controlling these risks through your portfolio investments. And this is done by optimizing your asset allocation. With the help of derivative instruments and sound investment diversification, risks can be scaled down — without affecting the income you require. If you wish to learn more about the way we manage institutional portfolios, one of our investment professionals will be happy to talk with you.

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INTERNATIONAL NEWS

Beijing issues renewed warning about finances

DESPITE improvements in China's economic performance, the government's financial situation remains troubled, crushed under the weight of subsidies and loss-making state enterprises, a senior official said yesterday, Reuters reports from Beijing.

"The national economy has regained normal growth," Zhang Zhongli, spokesman for the State Statistical Bureau, told a news conference. "Nevertheless, some problems and unstable factors remain in the performance of the national economy. First and foremost is the difficult situation of government finance."

After the collapse of communist rule in eastern Europe and the Soviet Union and the devastating economic problems there, Beijing's hardline communist leaders have staked their legitimacy on the results of continued economic reform, diplomats said. Store shelves are stocked with food and vegetables and private stalls offer a wide variety of goods.

Beijing may be mortgaging its future, however, with huge subsidies to keep prices stable and loss-making state industries afloat. Last week a finance ministry official, Wang Xingyi, told the state media: "Our finances are facing extremely serious problems and the whole financial situation is quite grim."

Zhang said 36 per cent of state enterprises, the cornerstone of the socialist economy, were running with losses in the first three quarters totaling 200 billion yuan (\$3.7bn).

But there had been some improvement recently, with third-quarter losses on average 5.5 per cent below those of the

first two quarters. Total stockpiles of unwanted, unsold goods are now worth more than 500bn yuan, with over 200bn yuan in the plants' warehouses and 300bn yuan in stores and at distributors.

Enterprises are still choked by debt chains as one loss-maker cannot afford to pay back another. Zhang said debts between enterprises now totalled 200bn yuan.

With the government pouring some 170n yuan in loans into the enterprises to try to clear the debt from the end of last month, Beijing runs the risk of stimulating a burst of inflation, economists said.

Bank loans are growing faster than the economy as a whole, thus aggravating the pressure of potential inflation, Zhang said. Inflation in cities averaged 8 per cent in the first nine months, but was well over 10 per cent in cities such as Beijing and Shanghai. Retail price inflation in the country as a whole rose to 4 per cent in September, against an average of 2.5 per cent in the first nine months.

Gross national product grew a real 6.8 per cent in the first nine months against the same period a year earlier, and Zhang said the rate for the year would be greater than 6 per cent. GNP grew 5 per cent in 1990 over 1989. Industrial production, which grew at 13.9 per cent in the first three quarters, would maintain that level of growth when the whole of 1991 was compared with 1990, Zhang said.

Wages and salaries of urban employees grew a real 6 per cent in the three quarters, while farmers' cash income grew a real 7 per cent.

Chinese economic reform damages health service

CHINA'S public health service has seriously deteriorated in the past decade with the adoption of market-oriented economic reforms, according to western experts.

While the country's living standards have generally risen, its co-operative medical care system has collapsed in many rural areas since the communes were dismantled in the early 1980s. "Sanitation and health services have suffered since the communes were disbanded and there is no longer a community financial base to provide for those services," one western observer said.

Agricultural collectivisation formed the foundation for medical care in China in the 1950s when the funds of collective enterprises paid for medical services in the rural areas. In the 1960s, under Chairman Mao, the government pioneered the use of "barefoot doctors", partially trained medical workers who provided rudimentary medical care in the countryside. Their example later served as a model for much of the developing world.

Beijing also made the improvement of health care in rural China a top priority. In the 1960s and 1970s co-operative medical care was responsible for basic sanitation, hygiene, health education, and public health services such as immunisation and ante-natal care.

All of these services were free or very cheap for most peasants, because they were paid for by the collectives. This is no longer the case. Individuals are now charged a fee for each service provided. This is the primary system of financing medical care in the rural areas.

In the cities, private entrepreneurs or many others working in small non-state run

Medical care has collapsed in many rural areas, writes an FT correspondent

enterprises must also cover their own medical costs.

"The real problem with this fee-for-medical-service is what the Chinese don't pay for. Under the previous system, preventive and educational services, insurance and immunisation were covered and increased the general level of health," one western observer said. With the demise of co-operative medical care, public health has suffered significantly. Disease prevention measures and general hygiene and sanitation are no longer the responsibilities of the village doctor.

Large public health campaigns have gradually been eroded by lack of funds. For example, hygiene measures, such as testing to ensure that night soil does not leak into the drinking water, are not done as routinely as they should be.

And with the lack of community-based labour, there is no leverage to implement sweeping disease prevention measures, similar to past rat and insect eradication campaigns.

Apart from the gradual decrease of public health measures in the poorer areas, pressure on village doctors to earn more money is growing. Under the new fee-for-service system, doctors are not paid for the range of hygiene, sanitation and educational services they formerly helped to provide.

While doctors were not paid separately under the collective system, these public health services were incorporated into the broad scope of their activities.

In addition to obtaining fees for services, doctors also prescribe and dispense medicine. They now earn royalties from the drugs they sell, in contrast to the time when they were part of a collective and all royalties were simply put back into the collective.

This pressure to sell more drugs than are necessary is exacerbated by the tendency of many doctors to over-prescribe medicine. In some cases, more complicated, expensive forms of treatment, such as intravenous drips to inject medicine, are often used when a simpler, less costly method would suffice, western experts said. From the patient's viewpoint, because a visit to the doctor is now more expensive, many wait longer until they are even more sick and can be attended to at a more sophisticated county clinic.

In the face of all of these problems, the Ministry of Public Health is exploring and experimenting with a wide variety of methods of financing and insurance schemes. It hopes by 2000 to have revamped the system entirely.

"But how will it get better unless the state gives them money?" one western expert wonders.

The ministry has also taken steps to raise the qualifications of the "barefoot doctors".

Despite the enormous problems, China's health care system by far surpasses that of many other developing countries. After Japan and South Korea, life expectancy is the highest in Asia.

The country's infant mortality rate and the number of contagious diseases are also relatively low according to western experts. The days when entire villages had to be evacuated because of disease are long past.



The three candidates for the leadership of Japan's Liberal Democratic party at a news conference in Tokyo yesterday ahead of next Sunday's party election. They are (left to right): Mr Kichi Miyazawa, Mr Michio Watanabe and Mr Hiroshi Mitsuoka. The winner becomes prime minister

UN team in Burma to visit Nobel laureate

A UNITED Nations human rights mission arrived in Burma yesterday to try to visit Ms Aung San Suu Kyi, the detained opposition leader awarded the Nobel Peace Prize last week for standing up to "a regime characterised by brutality", Reuters reports from Bangkok.

The mission, led by a Japanese university professor, Mr Yozo Yokota, is to stay in Burma until the weekend, said an official of the UN Development Programme contacted by telephone in Rangoon.

Western and Asian diplomats in Bangkok and Rangoon said Mr Yokota would try to investigate a wide range of human rights issues and seek access to Ms Aung San Suu Kyi.

She has not been seen by outsiders since early this year, when she was spotted from houses overlooking the garden in her compound on Rangoon's University Avenue.

A similar mission last year was denied access to her and other detained dissidents.

Ms Aung San Suu Kyi was put under house arrest in July 1989 after her outspoken attacks on the ruling military junta, which shot dead thousands of people during a mass uprising for democracy in 1988. The regime has jailed or persecuted thousands of opponents.

Mr Yokota will report to the UN Human Rights Commission in Geneva. He declined to comment on his mission when he was contacted before leaving Bangkok.

Last year, the Rangoon government greatly restricted a UN mission led by another Japanese professor, Mrs Sadako Ogata, when it attempted to seek information on human rights violations.

Last Monday, the Nobel committee in Norway awarded Ms Aung San Suu Kyi its annual peace prize for her courage in standing up to the Burmese regime.

Human rights groups, including Amnesty International, have catalogued numerous testimonies of sometimes fatal torture in Burma.

A senior member of Ms Aung San Suu Kyi's National League for Democracy (NLD) died in detention during Mrs Ogata's visit last November.

The junta said Mr Maung Ko committed suicide. Relatives alleged that heavy bruising all over his body showed he had been tortured to death.

The NLD won the May 1990 general election by a landslide but the junta has refused to hand over power and has arrested most NLD leaders.

The award of the peace prize to Ms Aung San Suu Kyi has intensified international calls for the junta to release her and honour the election result.

Last year, Sweden introduced a motion at the UN General Assembly criticising the junta's human rights record and expressing concern about its failure to step down. It was withdrawn after opposition, but Sweden plans to reintroduce it this year.

Taiwan joins fund in Latin America

TAIWAN, trying to use its economic strength to break out of international isolation, will join the Central American Bank for Economic Integration as a sovereign state after pledging it \$150m, Reuters reports from Taipei.

Mr Federico Alvarez Fernandez, president of the bank, said Taiwan would become an extra-regional member after approval by member countries, probably by the end of this year. "We believe the island can contribute to the economic development of Central America," he said yesterday.

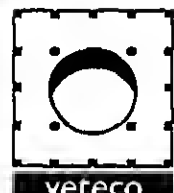
The multilateral lending institution covers Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, which are among the 28 states that formally recognise Taipei. Nicaragua restored relations last November.

Taiwan will join under its official name, "Republic of China", the island's foreign ministry said.

The bank will be the 11th international organisation to admit Taiwan under its official name. Taipei has had to use different names, such as "Taipei, China", to take part in other groups. The island is locked in a struggle against China for international recognition. Beijing views Taiwan as a renegade province and regularly seeks to prevent it from expanding ties with foreign countries.

OCTOBER MADRID

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VETECO
Window, Ceiling, Curtain Walls and Structural Glass Trade Show

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INTERLOOK
International Hairdressing, Beauty Care, Cosmetics and Perfume Show

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EXPOCALZADO
International Footwear Trade Show

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IBERPIEL/MARROQUINERIA
Leather/Furs Fashion Fair

14

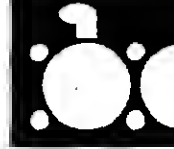
24



FICOP
Construction, Public Works, Mining and Maintenance Machinery Fair

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SALON BIENAL INTERNACIONAL DEL BRICOLAGE
International Biennial Do-it-Yourself Trade Fair

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Bush poised to unveil economic growth package

White House considers middle-income tax cuts

By George Graham in Washington

THE Bush administration is considering cutting taxes for middle-income families as part of an effort to stimulate economic growth, the White House said yesterday.

The move is in response to proposals from the Democratic-dominated Congress for a \$500 tax cut targeted at families earning between \$20,000 and \$75,000 a year.

President George Bush plans to introduce an economic growth package in the next few weeks, but White House officials have until now indicated they were concentrating on a cut in the capital gains tax rate, coupled with personal pension incentives and tax credits for research and development.

Both Republicans and Democrats in Congress have been calling for tax reductions in an

attempt to "jump-start" the economy, which has shown few convincing signs of recovering from the recession.

The administration was at first reluctant to admit to any doubts about the recovery, but has gradually changed its tune.

President Bush has yet, however, to spell out in detail his plans to spur economic growth, and has declined to give out-right support to legislation proposed by Senator Phil Gramm of Texas, which would include reducing the top capital gains tax rate to 19.5 per cent and indexing capital gains to inflation.

The White House's acceptance of middle-income tax cuts could provide common ground between the Republican and Democratic proposals, although there remains a yawning gap, notably over the

issue of capital gains tax and the funding of any tax cuts.

From the Democrats' side, Senator Lloyd Bentsen, chairman of the Senate finance committee, proposed this weekend a \$300 tax credit for each child in a taxpayer's family, at an estimated budget cost of \$60bn over five years. This would be paid for by cutting defence spending by 5 per cent over the next five years.

Mr Dan Rostenkowski, Democrat chairman of the House ways and means committee, is expected to produce his own package by month's end.

New tax legislation is unlikely to take effect before next fiscal year, which starts in October 1992 and so cannot be expected to provide immediate stimulation for the sluggish US economy.

San Francisco Bay blaze leaves 10 dead

CALIFORNIAN firefighters were yesterday still struggling against a fire which has engulfed residential neighbourhoods close to the cities of Oakland and Berkeley, killing 10 people and destroying an estimated 600 homes, writes Louise Kebab in San Francisco.



An Oakland resident attempts to comfort his dogs on Sunday afternoon as fire destroys his house

Progress will depend largely on the weather, which firefighters feared was turning against them. Winds, which fanned the flames on Sunday, died down early yesterday, only to pick up again. However, there were forecasts of drizzle, which could help extinguish "hotspots" continuing to burn in the area.

More than 1,000 firefighters from throughout the state struggled to contain the blaze, which cast a pall of smoke over the region.

Preliminary estimates of the damage are in excess of \$1.5bn. The fire has cut a swathe through some of the most exclusive residential areas of the San Francisco Bay area.

Worst hit were areas of the Oakland and Berkeley hills, where million dollar homes nestle among wooded areas with panoramic views of the San Francisco Bay.

The cause of the fire remains uncertain, but it is believed to have been sparked by a small brush fire which was extinguished on Saturday. Firefighters say this reignited on Sunday morning and spread after jumping firelines.

Strong winds whipped up the blaze on Sunday, rapidly spreading the fire over an estimated 1,700 acres. Vegetation was tinder-dry, a result of five years of drought. Water supplies, which are normally pumped to the hilly region, failed when pumping stations were engulfed by flames.

Thousands of residents of Oakland and Berkeley, whose homes are still threatened, have been evacuated. Red Cross shelters housed about 1,000 people on Sunday night. Two thousand students at the University of California, Berkeley, were evacuated as the fire neared the campus. Classes at the university and most schools in the area were cancelled yesterday.

The dead included a police officer and a Fire Department battalion chief, said Mr Renee Domingo, the city's emergency planning co-ordinator.

Governor Pete Wilson, who toured the area on Sunday, called the blaze the worst he had ever seen. He has declared a state of emergency, freeing state funds to help authorities cope with the wave of homeless people.

Talks over missile defences to resume

By William Duitorce in Geneva

THE US and the Soviet Union have agreed to resume talks in Geneva early in January on President George Bush's new proposal on ballistic missile defences.

Washington's plan for Global Protection Against Limited Strikes (Gpals) represents a radical departure from its earlier approach in the bilateral defence and space talks, which have been conducted inconclusively for the past six years.

Mr David Smith, chief US negotiator, said yesterday it would cost the US \$41bn to complete the programme before the end of the century.

During the past three weeks of discussion in Geneva the Soviets had not tried to tie the Gpals proposal to US concessions in other areas, such as a halt to nuclear tests.

Mr Smith denied the US planned to co-ordinate its ABM defences with those of the Soviet Union.

"The US also has no plans 'at this time' to share technology with the Soviets," he said.

Gpals provides for a three-layer defence comprising transportable tactical ABM systems operating at the theatre level, ground-based interceptors in the US, and space-based "brilliant pebble" interceptors.

The Soviets, who recognised there was a problem in dealing with ballistic threats from third countries, have been asking questions about the US proposal, tabled in Geneva on October 3, Mr Smith said.

Moscow had resisted SDI, claiming it was incompatible with the 1972 anti-ballistic missile (ABM) treaty.

Soviet President Mikhail Gorbachev's willingness to discuss the Gpals proposal showed there was also a change in Soviet attitudes to anti-ballistic missile defence, Mr Smith said.

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Setback in tobacco liability suit

THE Supreme Court, the highest US judicial body, has asked both sides to reargue a key tobacco industry liability suit, prompting speculation that the judges were unable to reach a definitive conclusion, writes Nikki Tait in New York.

The case, *Cipollone v Liggett et al*, was heard by eight judges on the Supreme Court earlier this month. The arguments centre on whether a federal law requiring tobacco companies to place warning notices on their cigarette packs prevents smokers who subsequently suffer ill health from suing them under state product liability laws.

It is the first time the Supreme Court has become involved in the emotionally charged issue of smokers' suits.

No reason was given for asking for new arguments, but the delay will allow new court member Judge Clarence Thomas to take part in the decision.

The new hearing is likely to take place next year.

Slow foreign investment worries Venezuela

By Joe Mann in Caracas

VENEZUELA'S economy in 1991 is growing at the fastest rate in recent years, but investment, a government key sector, is lagging far behind their performance in 1990, and considerably below government expectations.

The Superintendency of Foreign Investment, a government agency said that direct, registered foreign investment in Venezuela for the first eight months of 1991 was down by 41 per cent from the same period in the previous year.

At the same time, non-traditional exports (principally petroleum products), among the highest-priority areas, have fallen by around 30 per cent in value for the January-September period this year, according to government figures.

Officials say the government's decision this year to halt the application of debt-equity swaps to small and middle-sized investment projects has slowed the pace of new foreign investment. Some swaps have been approved for so-called "megaprojects", but foreign investors are still negotiating the financial arrangements for these large projects and big new investments have not as yet been made.

According to government figures, direct foreign investment in Venezuela last year totalled \$3.5bn, up 494m (16 per cent) from 1989.

Argentina to liberalise oil industry

ARGENTINA'S President Carlos Menem has announced a drive for foreign and domestic investment in oil exploration, under a far-reaching plan to deregulate the industry, writes Donald Greenleaf in Buenos Aires.

Mr Menem also pledged to accelerate the partial privatisation of the state-owned oil company YPF. This would involve, under a plan to be presented to Congress tomorrow, the sale of 49 per cent of the shares to private investors.

New laws, also to be presented to Congress tomorrow, will give companies the right to dispose of oil by export or sale on the domestic market at international prices.

Mexican trade deficit wider as imports surge

By Damian Fraser in Mexico City

MEXICO'S trade deficit widened to \$3.75bn in the year to August, reflecting a surge in imports, up 26.6 per cent compared to the same period last year. Excluding revenues from maquiladoras (in-bound plants), the deficit was \$6.44bn.

The eight-month non-maquiladora deficit of \$6.44bn is almost triple that recorded in the same period in 1990, and four times that in the first four months of this year. On current trends the non-maquiladora deficit for the year will exceed \$8.5bn, leading to a current account deficit of over \$10bn, or more than 3.7 per cent of GDP.

The deficit is nevertheless easily financeable, thanks to continued inflows of foreign investment, mainly into stocks and bonds. In the first half of this year Mexico ran a balance of payments surplus of \$10.5bn, international reserves now stand at a record \$16.27bn.

The huge inflows of foreign money have increased speculation that President Carlos Salinas de Gortari will fix the peso to the US dollar, or reduce the current devaluation of 5 per cent a year, in his state of the union speech on November 1.

The trade deficit reflects imports of \$24.36bn, and exports of \$20.61bn. Of the latter, non-oil exports amounted to \$12.47bn, a 13.5 per cent increase over the same period last year.

Caribbean textile makers seek open access to Nafta

By Canute James in Kingston

CENTRAL American and Caribbean garment and textile producers, who ship most of their output to the US, are asking the US government for unrestricted market access so they can compete with Mexico when that country becomes a part of the North American Free Trade Area (Nafta).

The regional producers, which last year exported \$1.8bn worth of goods to the US, representing a 12 per cent share of the market, say continued quota curbs and imposition of duties on their products would kill their industries by giving Mexican exports a clear competitive edge.

"This will wipe out an industry in the Caribbean and Central America whose exports to the US last year were valued at \$1.8bn," said Mr Peter King, Caribbean Co-ordinator of the Central American and Caribbean Textile and Apparel Council, and chairman of the Garment and Textile Commission of the Caribbean Common Market.

"If Mexico gets free access and we do not, millions of dollars in investments, by US and regional businessmen, and tens of thousands of jobs will be lost."

The Central American and Caribbean request will be put to the US, Canada and Mexico at a meeting in Dallas, Texas, on November 1, at the US Apparel Industry Council, will be attended by Mr Ron Sorini, chief US textile negotiator.

"The current US-Mexico bilateral text contains language which suggests all quotas will be dropped immediately on the signing of the Nafta agreement," said Mr King. "An added advantage to Mexico is in lower shipping costs in moving the products across the US-Mexico border."

The last of the regional exporters to the US last year were the Dominican Republic, Costa Rica, Haiti, Jamaica and Honduras.

using the canal jumped by almost 800 per cent in 1990, but this still made up less than 2 per cent of total traffic. Tolls were raised 6 per cent in January of this year, in line with the authority's estimate of world inflation, and traffic volume in the first half of 1991 matched 1990 levels.

Already, the 100-km waterway can accommodate vessels with a draught of up to 53 ft. In ballast, typically en route from Rotterdam to load oil in the Gulf, supertankers of 555,000 dwt and over 200 ft in beam can scrape through the canal. But the maximum size for fully laden ships is 150,000 dwt, prohibiting passage of loaded supertankers.

Although the channel's numerical capacity is only 80 ships a day, passing in alternating northbound and southbound convoys, this limit has never in fact been reached. While tonnage has grown, the daily average of transit has fallen from a peak of 83 in 1981 to less than 50 today.

Partly for meeting conventional cargo, but also to increase tonnage capacity, for example, by building extra bypasses to allow two-way traffic, the SCA has successfully focused

Suez Canal finds itself at the crossroads

Plans are under study to double the size of ships the waterway can take, Max Rodenbeck writes

THE SUEZ Canal, a crucial avenue of world trade, has reached a crossroads. Ten years after shelving plans to expand, the Egyptian state authority which runs the waterway is again considering whether to spend over \$1bn (\$500m) to double the size of ships the canal can accommodate.

The Suez Canal Authority (SCA) faces difficult choices. It must consider the size and shape of the future world shipping fleet, predictions of international trade flows and the projected price of oil plus the cost of dredging millions of cubic metres of dirt.

The canal has achieved a solid financial performance with its present capacity, but Egypt wants to win custom from the larger ships which now characterise the world's merchant fleets.

Confounding predictions that the Gulf war would severely dent incomes, the canal turned over a record \$1.77bn in the year to June, a 15th higher than the previous year. A surge in Saudi oil exports helped to boost cargo traffic through the canal.

The tonnage of warships

on attracting vessels of larger size. Lured by a system of rebates, the number of supertankers of more than 300,000 dwt using the canal has tripled since 1985.

But because of the increasing unit size of the world's oil fleet, the canal has seen its share in the oil transport market drop. Partly for meeting conventional cargo, but also to increase tonnage capacity, for example, by building extra bypasses to allow two-way traffic, the SCA has successfully focused



Traffic through the canal: a solid financial performance

mean oil pipeline (Sumed), which, like the Suez Canal, links the Red Sea to the Mediterranean.

Increasing the canal's share of this market, which is expected to grow by 40m tonnes a year over the next decade, will mean widening and deepening the channel. SCA officials say the cost of new works depends on which of five options is chosen. Given the canal's dependence on oil, financing is unlikely to be an obstacle.

Three separate consulting teams, among them NEDECO,

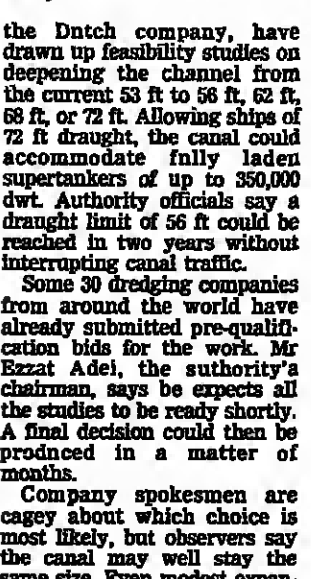
the Dutch company, have drawn up feasibility studies on deepening the channel from the current 53 ft to 56 ft, 62 ft, 68 ft, or 72 ft. Allowing ships of 72 ft draught, the canal could accommodate fully laden supertankers of up to 350,000 dwt. Authority officials say a draught limit of 56 ft could be reached in two years without interrupting canal traffic.

Some 30 dredging companies from around the world have already submitted pre-qualification bids for the work. Mr Bezat Adel, the authority's chairman, says he expects all the studies to be ready shortly. A final decision could then be produced in a matter of months.

Company spokesmen are cagey about which choice is most likely, but observers say the canal may well stay the same size. Even modest expansion could cost up to \$1bn, an investment which could take a decade to recoup.

The competing SUMED pipeline, meanwhile, has already begun work to raise its capacity by 50 per cent to 2.4m barrels a day.

The waterway's last expansion, completed in 1980 at a



cost of \$1.3bn, required the use of 37 dredgers from 10 countries. Financing, much of it on concessional terms, came largely from Japan. Falling oil prices and a global economic slowdown in the early 1980s caused the authority to shelve a planned second phase.

Researchers cast doubt on Asean free trade pact

THE recent accord by south-east Asian trade ministers to form a six-nation free trade zone within 15 years "should be taken with grain of salt" as unlikely to affect trade patterns substantially, the Hong Kong-based Political and Economic Risk Consultancy (PERC) said, Renter reports from Singapore.

The plan, announced by Association of South-East Asian Nations (Asean) officials in Kuala Lumpur on October 8, "was a hybrid, committing member states to surprisingly little. Asean, already 24 years old, does not have a particularly impressive track record when it comes to promoting economic co-operation between member states," Asean groups Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand.

The pact, endorsed by the Asean ministers, is to be refined into a more detailed package for approval by Asean heads of state at their summit

in Singapore next January. It aims to cut Asean tariffs on manufactured goods gradually and sector-by-sector over 15 years. But PERC said the plan's limited nature and strong rivalries would inhibit it. "For example, individual countries retain the right to opt out of the common effective tariff scheme in sectors in which they do not feel comfortable."

The Asean framework accord covers only manufacturing, omitting trade in agriculture or services, "thus sidelining a minefield of conflicting interests regarding matters such as the development of the banking industry and the production of palm oil, rubber and other commodities."

Even for manufacturing, Indonesia's refusal to cut tariffs on products from more developed Asean neighbours pushed the free trade deadline beyond Thailand's proposed 10 years.

Polish airline seeks to halve fleet of 42 aircraft

LOT, Poland's state-owned airline, plans to halve its fleet of 42 aircraft and eliminate all its Soviet-built aircraft by the middle of the decade, Christopher Bobinski reports from Warsaw.

Mr Bronislaw Kilmaszewski, LOT's managing director, said yesterday all seven of his IL-62s which used to fly on the line's transatlantic routes are to be grounded next month.

He was speaking soon after LOT signed a contract with Boeing for delivery by 1994 of nine Boeing 737s worth some \$300m (\$174.4m) for LOT's European routes. These will replace its 21 Soviet-built Tupolevs.

By then, LOT will have nine Boeing 737s, three Boeing 767s and eight French ATR aircraft. The purchase of another "two or three 767s" was being considered, Mr Kilmaszewski said.

LOT's IL-62s were costing \$1.18m (\$336,000) a month in losses to fly and maintain. Chances of selling these air-

craft were "diminishing anywhere and everywhere".

But LOT was talking to the Soviet Airlinesport about a barter deal involving the ILs or it was hoped they could be leased to airlines set up by the newly-independent Baltic states.

Robert Gibbons reports from Montreal: SCA's US feeder airline 23 per cent owned by Delta Air Lines, has placed a firm order worth \$399m (\$203.6m) with Bombardier's Canadair aerospace group for 20 Regional Jets.

Comair has taken options on a further 20 of the 50 passenger aircraft. Part of the fuselage of the Regional Jets is made by Short Brothers in Belfast, a Bombardier subsidiary. Excluding the options, the Comair order will bring Bombardier's total aerospace order backlog to nearly \$450m. The Regional Jet is going through the certification process. First deliveries begin next year to a Lufthansa feeder line.

Japan reviews insurance on exports to Iran

JAPAN'S Ministry of International Trade and Industry (MITI) is reviewing requests for insurance on Japanese exports to Iran, but has yet to give its approval for any submitted thus far, a MITI official said yesterday, AP-JP reports from Tokyo.

The official was responding to a report in the Iranian press on Saturday that the Japanese government had agreed to insure Iran-bound exports, starting in late November.

"We're looking at the requests on a case-by-case basis, but have reached no concrete decisions," he said. MITI has been considering applications for insurance since the beginning of this year because of Iran's impartial stance during the Persian Gulf crisis, he added.

Japan had refused to consider extending credit and insurance for exports bound for Iran ever since that country's fundamentalist revolution in 1979.

US in China market access talks

MR Joseph Massey, US assistant trade representative, arrived in Beijing yesterday for talks this week on market access and protection of intellectual property rights, two crucial issues which have angered Washington, agencies report from Beijing.

Mr Massey's talks, which were due to last from yesterday until Friday, will be with China's ministry of foreign economic relations and trade.

This is the organisation that is trying to protect billions of dollars-worth of exports from possible punitive sanctions.

The talks will be one of the last sessions before the November 26 deadline for another investigation. This inquiry concerns China's protection of copyrights and patents.

On Sunday, the China Daily newspaper quoted Qin Aunan, deputy director of the National Copyright Administration, as saying China would join the Berne Convention and the Universal Copyright Convention, on the basis of the existing Chinese copyright law.

Such a step would occur "at an unspecified date, but well before the end of next year".

China's first copyright law came into effect on June 1, 1990. Beijing has come under fierce international pressure to improve its record on intellectual property rights. A lot of this pressure has emanated from the US.

This week's negotiations will be the first in Beijing since the Bush administration launched a year-long trade inquiry on October 10 to investigate allegations that Beijing restricts US exporters' access to China's markets, or even denies such access altogether.

If after the investigations, the US decides to retaliate against China, it could impose tariffs of up to 100 per cent on some of China's exports to the US, in order to compensate for alleged losses.

The duties could eat into China's profitable trade with the US, which is growing larger and is itself an issue of concern and anger for many US legislators.

Washington says China exported \$5.9bn (\$3.43bn) more to the US than it imported in the first seven months of 1991. This would represent a jump of 13.5 per cent in its surplus compared with that at the same time a year ago.

China had a surplus of \$10bn with the US for all of 1990, Washington says.

Beijing disputes the figures, saying it buys more from the US than it sells.

Beijing has reacted angrily to the US position. After the latest investigation was launched, a Beijing government spokesman said: "We feel strong dissatisfaction at the United States' unilateral investigation... We absolutely cannot accept the accusations."

Beijing maintains that it has done a lot to open its markets and protect intellectual property rights already.

These steps include implementing a new copyright law, offering to join international copyright pacts, and proposing a number of market-opening measures.

UK NEWS

Lonrho fails to win court backing on Fayed case

By Robert Rice,
Legal Correspondent

LONRHO, the international trading conglomerate, yesterday lost the latest round of its legal battle to wrest control of House of Fraser store group from the Fayed brothers.

The High Court in London decided the government had not acted unlawfully in failing to seek the disqualification of the stores group's owners as company directors.

The court also said Mr Nicholas Ridley, the former trade secretary, had not acted perversely or unreasonably when he refused to seek disqualification of the Fayed brothers in 1990, in spite of a Department of Trade and Industry inspectors' report which concluded that they had lied during their 2515m takeover of the group in 1985.

Lonrho also wanted the court to order Mr Peter Lilley, the current trade and industry secretary, to reconsider Mr Ridley's decision and take action against the Fayed brothers.

Lord Justice Neill said the court was limited to ruling whether or not Mr Ridley had arrived at a decision which no reasonable secretary of state could have made on the evidence before him.

He had properly taken account of the allegations in the report. He had set against the fact that the aim of the 1986 Act was not to punish individuals but to protect the interests of the public and shareholders.

No former House of Fraser shareholders had suffered as a result of the 1985 takeover, and since then the Fayed brothers had conducted their business in a law abiding, proper and regular manner.

The DTI report had concluded that the Fayed brothers dishonestly misrepresented their origins, wealth, business interests and resources to the Secretary of State, the Office of Fair Trading, the press, the House of Fraser board, the company's shareholders and their own advisers.

Lonrho, which has several legal actions pending against the Fayed brothers and the House of Fraser, owners of Harrods, the luxury goods store, is considering an appeal.

Major attacks intervention by Ripa di Meana

By Alison Smith in London, Robert Mauthner in Harare, and Andrew Hill in Brussels

THE political row over the European Commission's intervention in environmental studies for seven construction projects in the UK flared again yesterday.

Mr John Major, Britain's prime minister, wrote to Mr Jacques Delors, the Commission president, expressing "severe irritation" at the way the matter had been handled.

Mr Major made clear his annoyance at the personal letter sent last week from Mr Carlo Ripa di Meana, the environment commissioner, to Mr Malcolm Rifkind, the UK transport secretary, suggesting that work should be stopped until differences about environmental impact studies had been settled. Mr Major, in Zimbabwe for the Commonwealth conference, described the intervention as "astonishing".

Having called for a full report on the affair over the weekend, he commented yesterday that the UK had had no prior notice of the move, and that this was not the first time it had happened. "It seems to me to be on the basis of ill-founded reports and not facts. It is also on the basis of reports that were not discussed with the United Kingdom. It seems

to me to be absolutely how the European Commission ought not to behave and I have told them so."

Mr Delors is understood to be angry that Mr Ripa di Meana decided to publicise his personal letter to Mr Rifkind. Mr Ripa di Meana sent his press release on the infringement procedure direct to journalists.

His letter said that the UK failed to follow EC procedures on the environmental impact of the work which includes the high-speed rail link from the Channel tunnel to King's Cross station in London, and the East London River Crossing.

The UK government and the Commission are acutely conscious that the intervention comes at the sensitive period of the run-up to the Maastricht summit on economic and political union, and are anxious to minimise its impact on the broader discussions.

Mr Rifkind is preparing a detailed response, and department of transport officials remain confident of the success of their explanation that the schemes were approved under UK procedures which include an environmental assessment equivalent to EC standards.

Former BCCI auditor to co-operate with inquiry

PRICE WATERHOUSE, the former auditor of the Bank of Credit and Commerce International (BCCI), was yesterday given leave by the High Court to provide confidential information about its former client to the inquiry into the collapse of the bank.

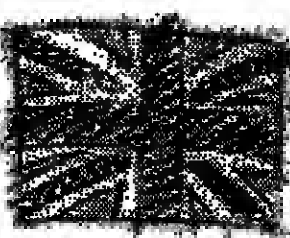
The inquiry, chaired by Lord Justice Bingham, was set up by the Chancellor of the Exchequer and the Bank of England last July to inquire into the supervision of BCCI and to consider whether action taken by the UK authorities was appropriate and timely.

It is a non-statutory inquiry without power to compel witnesses to give evidence or produce documents. It will sit in private but its findings will be made public.

Mr Justice Millett granted Price Waterhouse a declaration that neither obligations of confidence to BCCI and its provisional liquidators nor legal professional privilege precluded them from supplying documents or information specifically requested by the inquiry.

Mr Douglas Hogg, the junior foreign office minister, will visit the United Arab Emirates at the end of this month. Discussions are expected to include the BCCI collapse.

BRITAIN IN BRIEF



Deadline set for cable TV companies

The government has delivered an ultimatum to cable television companies which have not so far raised the necessary finance to start operations.

Mr Peter Lilley, the trade and industry secretary set a three month deadline for companies holding 13 cable television franchises but which have not yet been awarded the necessary telecommunications licences to operate a service.

Mr Lilley said 13 other franchises remained unlicensed and stuck on the starting blocks. "I have therefore decided to challenge the holders of these 13 franchises. Either come up with the evidence of financial commitment that by department requires - by law - in order to issue a Telecommunications Act licence or clear the fields for others to do so," Mr Lilley told the Cable Convention in London.

The cable companies involved include Comment Cable, a subsidiary of US Cable Corp, which has faced difficulties raising money for franchises covering six towns in England.

Few students take loans

Less than a third of students took a government "top up" loan last year, and administrative costs for the loan scheme amounted to almost 20 per cent of the total lent, according to the first annual report of the student loan company.

The government-owned Student Loans Company lent some £70m to 180,000 students in the 1990/91 academic year - 28 per cent of the student population. The average loan was £385.

Administrative costs amounted to £13m - 34 per cent of the total lent.

Seelig defends reputation

Mr Roger Seelig had no need to win another takeover bid to boost his reputation in the City at the time of the 1986 battle for Distillers, his former secretary told a London court. Mr Seelig, then corporate finance director at Morgan Grenfell, Guinness's principal merchant bank during the bid, had already established his reputation, said Miss Mary Stanford.

Cross-examined by Mr Seelig she agreed that in early 1986 his workload, apart from the Distillers bid, included the merger of Habitat/Mothercare and British Home Stores, the Stock Exchange listing of Virgin, the sale of Our Price to W.H. Smith and P&O's purchase of European Ferries.

Mr Seelig and Lord Spens, former corporate finance managing director at the Henry Ansbach merchant bank, are jointly charged with conspiring to contravene the 1958 Prevention of Fraud (Investments) Act. Mr Seelig faces another charge under that act and two of false accounting. Lord Spens faces one false accounting charge. Both pleaded not guilty.

Extension for MMC report

The Monopolies and Mergers Commission (MMC) has been granted a second extension, until December 20, to complete its investigation into whether the structure of new car parts suppliers in the UK is anti-competitive.

The car parts inquiry has been running in parallel with a more wide-ranging probe into new car prices and whether they are influenced by the system of exclusively franchised car dealers.

The greater urgency and complexity of the inquiry into car prices and distribution is understood to have been mainly responsible for the extra time needed to complete the parts investigation.

Conoco makes oil find

Conoco, the US oil company, said it found oil in block 29/2a in the North Sea, 150 miles east of Aberdeen. The well found oil flowing at an average rate of 9,000 barrels a day and another well is planned to appraise the discovery.

Treasury to alter tax rules

The Treasury said it will demand that Britain's 1,600 largest companies speed up payments of value added tax (VAT) by January 1993. The move enables the government to avoid an increase in its borrowings in order to comply with European Community rules on tax.

To avoid increasing the Public Sector Borrowing Requirement (PSBR), the largest businesses will have to begin making VAT payments monthly, instead of quarterly, as is now the case. The move could send hundreds of companies scrambling to find the cash to pay their tax payments more quickly.

If the payments are not speeded up, the effects of EC tax harmonisation would cause a one-off increase in the PSBR of an estimated £2bn for the 1992-93 fiscal year.

Currently, all businesses pay VAT quarterly on domestically produced goods and VAT on imported items at the time of importation.

Two held over BCCI evidence

A member of the Serious Fraud Office team investigating the collapsed Bank of Credit and Commerce International (BCCI) has been remanded in custody on charges of conspiring to destroy or steal documentary evidence relating to potential fraud trials.

Mr Mark Braley, a trainee accountant with Coopers and Lybrand, was remanded in custody for a week at a London court. Mr Braley is jointly charged with Mr Bernard Lynch, a freelance accountant. He was also remanded in custody.

Both men were charged that on or before October 19, they conspired to pervert the course of justice by removing, destroying or defacing documentary evidence relating to fraud trials resulting from the collapse of BCCI in July.

Mr Braley was one of 11 accountants domestically produced goods and VAT on imported items at the time of importation.

Receivers at Slumberdown

Slumberdown Group, the Scottish-based duvet, quilt and pillow manufacturer, has gone into administrative receivership after cutbacks failed to stem its losses. The jobs of 150 employees working in Hawick, in the Scottish borders, are under threat although the receivers are hopeful of selling the business as a going concern.

Government health pledge

Mr William Waldegrave, the health secretary, gave a categorical undertaking that any attempts to introduce new charges for National Health Service patients were illegal and would be stamped out. His assurance came during an impassioned Commons debate that again pitted Labour charges of "creeping privatisation" of the NHS against Tory claims that the opposition has no alternative reform.



Royal Opera cancels performances amid pay dispute

THE ROYAL Opera House (ROH) in London has cancelled performances "for the foreseeable future" as a dispute with musicians over pay escalated. Management made the decision after members of the 120-strong orchestra stayed away from a final dress rehearsal of Meyerbeer's Les Huguenots. They had been requested not to turn up unless they were prepared to "work normally." The Musicians' Union, however, said its members had been staging only limited action because they did not want to jeopardise productions. Mr Robert Troy (above), a violinist in the orchestra and a Musicians' Union steward, said comparable orchestras in other European capitals were either paid more or were not required, as were ROH orchestra members, to provide their own instruments.

ANOTHER LATE NIGHT at THE OFFICE.

There you are 43,000ft above sea level. Perched, seat tilted, working your way through the latest episode of "The Never Ending Cootrac" saga.

While you do, spare a thought for those less fortunate business travellers.

You know. The ones who are working their way slowly towards the check-in desk and a headache.

The ones who won't be catching a flight that's geared to suit their schedule.

The ones who won't be landing at an airport that is convenient for them.

The ones who have no control over the shape, size and configuration of the seats they'll be occupying - let alone the company they'll be keeping.

Hardly surprising then, that a growing number of key executives are sparing more than a thought for corporate travel.

And why, increasingly, we're finding the question "Why should I use a corporate jet?" being replaced with "How do I convince the Board?"

Hence an industry initiative: The British Aerospace Guide to Corporate Travel.

It's wide-ranging, comprehensive and there's a copy waiting for you right now.

Send or fax your business card and it will be winging its way to you. You'll find it makes compelling late night reading.

BRITISH AEROSPACE
CORPORATE JETS

Corporate Aircraft Sales (HTF 2).
British Aerospace (Commercial Aircraft) Ltd, Comet Way,
Hatfield AL10 9TL, England. Fax: (0707) 253 807.

RANK XEROX

Productivity isn't how much you put together. It's how well you put it together.

This is a short business story. About improving the way you do business by changing the way you put documents together.

With over one million vehicles being driven in 150 countries, a leading automotive manufacturer wanted to improve the way it produced the highly specialized documents that went with each of its vehicles, no matter where in the world they were going.

Working with each of the manufacturer's different divisions, Rank Xerox put together a comprehensive information network with sophisticated laser printing options. Connecting a host of Rank Xerox equipment to a host computer, work groups were able to break new ground in creating and processing documents.

A few telling examples: The cost of technical publications was reduced by 25%. And the time it took to do complex foreign language translations of the Driver's Handbook on demand was reduced by 50%. The lead time to produce a publication was reduced by 80%.

Or, to put it in other numbers: The average lead time to create a document

essential to customer service was reduced from 67 days to 10 days.

Not incidentally, the initial investment in the Rank Xerox solutions was returned in the first nine months. To see if your organization can enjoy similar results, the first step is to consult with experts from our organization.

We can help you analyze how ideas and documents work in your business. And we can show you more productive ways for everyone to work better together with the copiers, printers, workstations, fax machines and publishing systems that create, shape and move the documents that move your company forward.

But that would be another story.

RANK XEROX
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UK NEWS

Labour protest over Unisys jobless scheme

By Michael Skapinker

MR ROBIN COOK, a leading opposition Labour party spokesman, has protested to Unisys, the US computer manufacturer, over plans to halve the redundancy payments of employees from the company's plant at Livingston, Scotland, if they leave for another job before the plant closes next February.

Unisys said earlier this month it would close the factory with the loss of 696 jobs as part of a programme of reducing the worldwide workforce by 10,000.

In a letter to Mr Jim Unruh, Unisys's president, Mr Cook, who is the MP for the nearby town of Livingston, said it was unfair to penalise staff who managed to find alternative employment.

"Given the rising unemployment in Britain they would be foolish not to take the chance of a job if they were offered it," Mr Cook said.

Unisys is offering employees under 40 years old two weeks redundancy payment for each year of service and two and a half years for those over 40.

Unisys has engaged Coutts, an employment consultancy, to help employees from the factory find new jobs. Mr Cook said in his letter: "It does appear perverse that the company should ... be penalising financially those staff who are successfully placed by the agency hired by the company."

Mr Cook added that employees at the Livingston plant suspected that their factory, which makes cheque-processing equipment, receipt printers and credit card reading devices had been singled out for closure because redundancy payments required by UK law were less generous than those in France, where the company has other factories.

Unisys denied the decision to close the Livingston plant was affected by the level of redundancy payment required by law. The closure was based on a consideration of the demand for products made at its various factories, the company said. Unisys confirmed that employees who left before the factory closed would lose half their redundancy payments.

Opposition pledges private loans for BR

By Richard Tomkins, Transport Correspondent

THE Labour party will allow British Rail (BR), the state railway, to fund the acquisition of badly needed commuter trains with private-sector finance if the opposition wins the general election.

Mr John Prescott, the party's transport spokesman, will tell a conference on railway finance today that a Labour government would encourage BR to buy trains for Network SouthEast through sale-and-leaseback deals arranged through City banks.

The first routes to benefit would be the commuter railways between London and Kent, in south east England.

BR has won government approval for plans to replace the trains, but has had to postpone the later phases of the replacement programme because it has run out of money.

BR's powers to invest are at present constrained by tough Treasury rules which prevent it from obtaining finance from anywhere other than the government.

This is already common in Continental Europe. In France, for example, the state-owned railway buys its high-speed trains from the manufacturer, then sells them to banks and leases them back.

The government says laxer financial strictures for Continental railways have led to the accumulation of massive debts requiring periodic write-offs at the taxpayer's expense.

Retail sales remain at low levels despite interest rate cut

By Rachel Johnson, Economics Staff

RETAIL SALES volumes have stuck at low levels despite the cut in UK interest rates at the beginning of September, according to figures which hit shares and the pound yesterday.

Provisional estimates from the Central Statistical Office (CSO) revealed that September sales volumes failed to rise above August's depressed levels. They were lower than in July, when bad weather boosted retail spending and government hopes of an "economic spring".

The latest figures disappointed traders on London's stock and currency mar-

kets after a moderately heartening distributive trades survey from the Confederation of British Industry, the employers organisation, yesterday.

Retailers, meanwhile, had reported higher annual sales in September for the second month running.

The retail sales data reinforced the nervousness roused by a weekend opinion poll putting the opposition Labour party seven percentage points ahead of the Conservatives.

The pound lost ground to close at DM2.9050 after Friday's DM2.9125, limiting the chancellor of the exchequer's

scope in next month's Autumn Statement for cutting interest rates or raising public spending to speed up the economy.

Sterling cannot sink below its DM2.8625 floor in the European exchange rate mechanism.

Though the amount of goods sold last month was 0.7 per cent down on the same month a year ago, an assessment of sales over the last two quarters shows the trend has begun gently to rise.

According to the less volatile three-monthly comparisons, sales volumes

in July to September were 0.6 per cent up on the previous three months, but still half a per cent lower than the same three months a year earlier.

The Treasury pointed out that this was the first complete set of economic data for the third quarter, and could point to a rise in gross domestic product during this period. Consumer spending counts for about two-thirds of gross domestic product.

Additionally, the Retail Consortium, the umbrella body for the retailing industry, said September was a "small but encouraging improve-

ment" because volumes were static after August's fall.

It supported the CSO's picture of retailing which showed no upturn yet but no worsening in trading conditions.

Mr Steven Bell, economist at Morgan Grenfell, said that he was confident volumes would soon pick up as the savings ratio - the proportion of income saved not spent - had stabilised at around 10 per cent.

"It will start to fall and shortly lead to a pick-up in consumption necessary for recovery," he predicted.

UK manufacturing faces 10-year challenge to compete

By Michael Cassell, Business Correspondent

BRITAIN'S manufacturing industries have made big strides over the last decade but they still face a 10-year struggle to catch up with overseas competitors, according to the Confederation of British Industry (CBI).

Yesterday's report from the manufacturing advisory group of the CBI, the employers' organisation, gives credit to Britain's manufacturing achievements over recent years. But, simultaneously, it dashes any lingering complacency by emphasising the yawning gap which still separates the UK from what the employers' organisation calls "the world's best".

The report stresses that UK manufacturing output is running 25 per cent above the level recorded 10 years ago. Manufacturing now employs 10m people directly or indirectly, which contributes more than £100bn to the country's gross domestic product.

The UK's share of manufactured exports is, after decades of decline, rising again and while growth in manufacturing output is close to the average for industrialised countries productivity has increased more rapidly than every country except Japan since 1980.

Major factors in the improved performance include increased emphasis on quality, training and innovation - areas where UK companies have traditionally lagged behind. Improved employee relations and a growing army of small manufacturing companies - increasing at the rate of 100 a week in the last ten years - have also contributed to a better manufacturing effort.

Even so, the CBI says Britain's manufacturing com-

petitions still have better equipment, better trained personnel and a more productive relationship with owners and governments.

It emphasises that UK manufacturing productivity is still 30 per cent lower than in West Germany, 35 per cent below Japan and around 45 per cent below the United States.

Ending the productivity gap with West Germany by the end of the century will, for example, require UK productivity growth to exceed German performance by 3.5 per cent each year. This implies growth of up to 6 per cent annually, compared with an average 4 per cent between 1985 and 1990.

The recession, according to the CBI report, has made mat-

ters significantly worse in the short-term, with a higher proportion of manufacturers working below capacity than at any time since 1983. Competitiveness has also been undermined by a large drop in fixed investment in manufacturing - likely to be 22 per cent lower than in 1988.

In calling for "a fundamental shift in attitudes at all levels", however, the CBI also addresses the longer-term weaknesses affecting the manufacturing sector and apporportion blame between companies, banks and government.

The CBI criticises the wide variation in productivity between the best and worst manufacturing companies and calls for the universal adoption

of "best practice" management techniques aimed at beating the productivity performances achieved in Japan and the US. It wants better training, the spread of an "innovation culture" and improved relationships between customers and suppliers.

The CBI also gives high priority to the need for a more supportive approach from government. It says the Department of Trade and Industry often appears ineffective in promoting the interests of manufacturing in Whitehall and suggests it should play a greater role in formulating any government policy with a direct bearing on manufacturing competitiveness.

The report calls on the gov-

ernment to lower the burden of business taxation in order to encourage manufacturing investment. The CBI points out that the taxation of corporate profit rose steadily during the 1980s and is higher than the European Community average.

The British financial sector, meanwhile, is compared unfavourably with those of some competitor nations and the report says the financial systems in Japan and Germany have supported the development of manufacturing industry much more positively by providing consistent, long-term support.

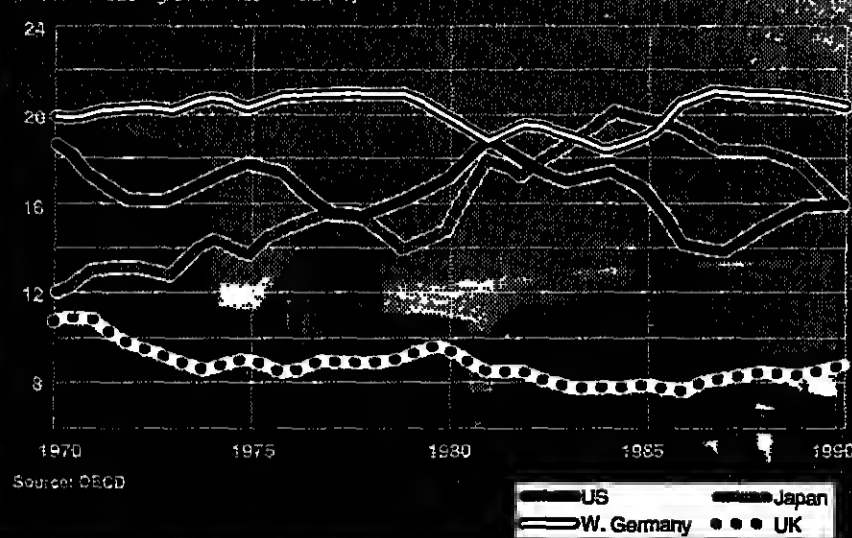
Although the report discounts a radical restructuring of the UK financial system, it calls for "a more balanced rela-

tionship" between banks and smaller companies and the creation of local investment companies which would serve small businesses. Lending institutions, it suggests, should move away from lending to businesses on the basis of security on property and advance funds on the strength of individual business propositions.

The report welcomes the prospect of low and stable inflation and adds: "The economy is at a turning point. Either we return to the 'boom and bust' cycle which has plagued British manufacturers seemingly forever, or we invest in our manufacturing base. There is no middle way". Editorial comment, Page 20; Lex, Page 22

Manufacturing exports

Share of leading countries' trade (%)



Source: OECD

— US — Japan
— W. Germany — UK

THE STORY OF THE TRANS-MISSION THAT TALKS WITH THE ENGINE.

You're about to witness a conversation between an automatic transmission and an engine computer. "Shift speed reached", the engine computer informs the transmission computer. "Proceeding to shift", the transmission replies. Immediately the engine computer reduces power output for a split second and gives the command, "Shift now." The transmission computer completes the shift and then advises, "Resume normal power."

While this continuous dialogue is going on, the driver is blissfully unaware of its benefits. "The four-speed automatic... shifts with the gentleness of a Lotus blossom in the wind", wrote a leading newspaper. It means that all

180 kW are brought into motion in an almost imperceptible way, even during dramatic transitions when Lexus accelerates from 0-100 km/h in 7.9 seconds or climbs to its maximum speed of 245 km/h.

The newly developed 4.0-litre V8 engine is able to generate this extraordinary power by using four valves per cylinder - two for intake and two for exhaust. This results in deep easy breathing that both increases output and decreases fuel consumption. For smooth operation, aluminium valve lifters have been used to reduce valve train inertia, thereby all but eliminating noise and friction.

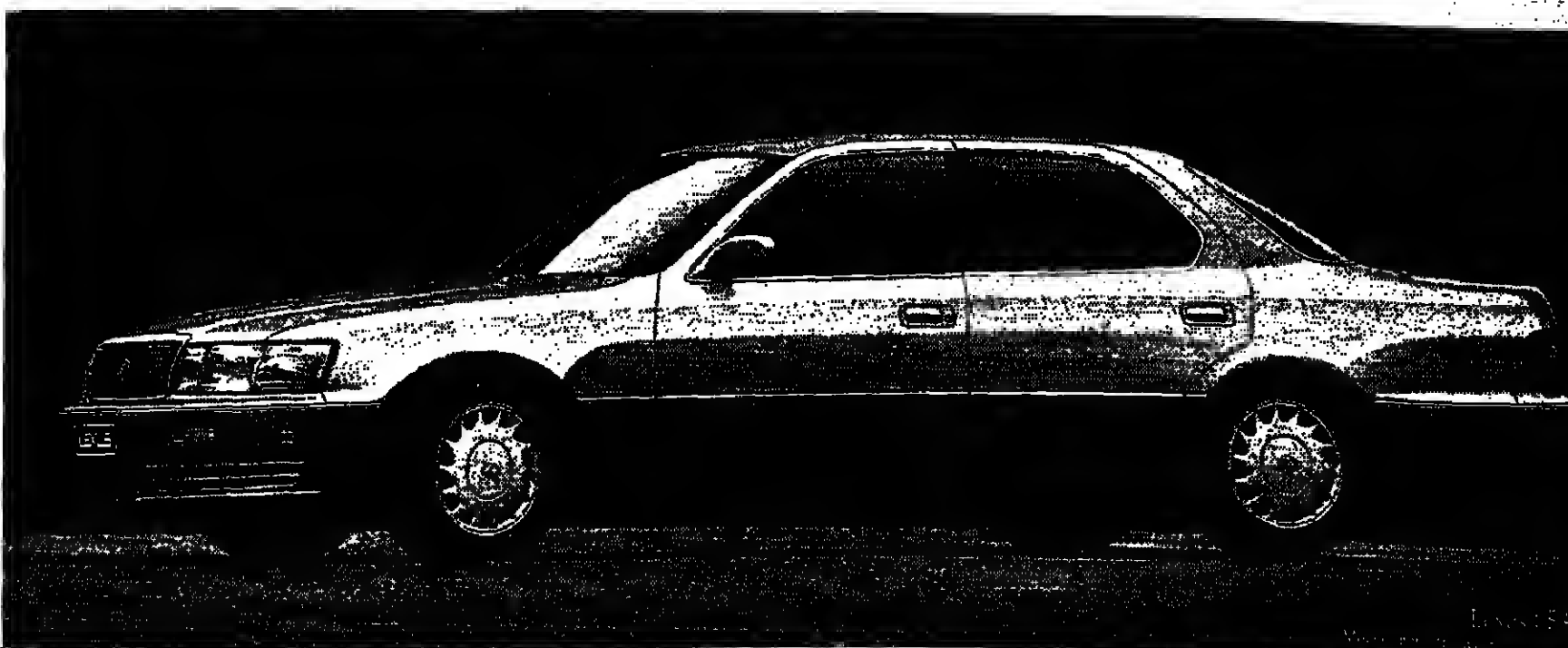
The new V8 engine, however, is only one example of the Lexus engineering

philosophy: to develop a totally new automotive concept instead of reworking an existing one.

INSPIRED TO PERFECTION.

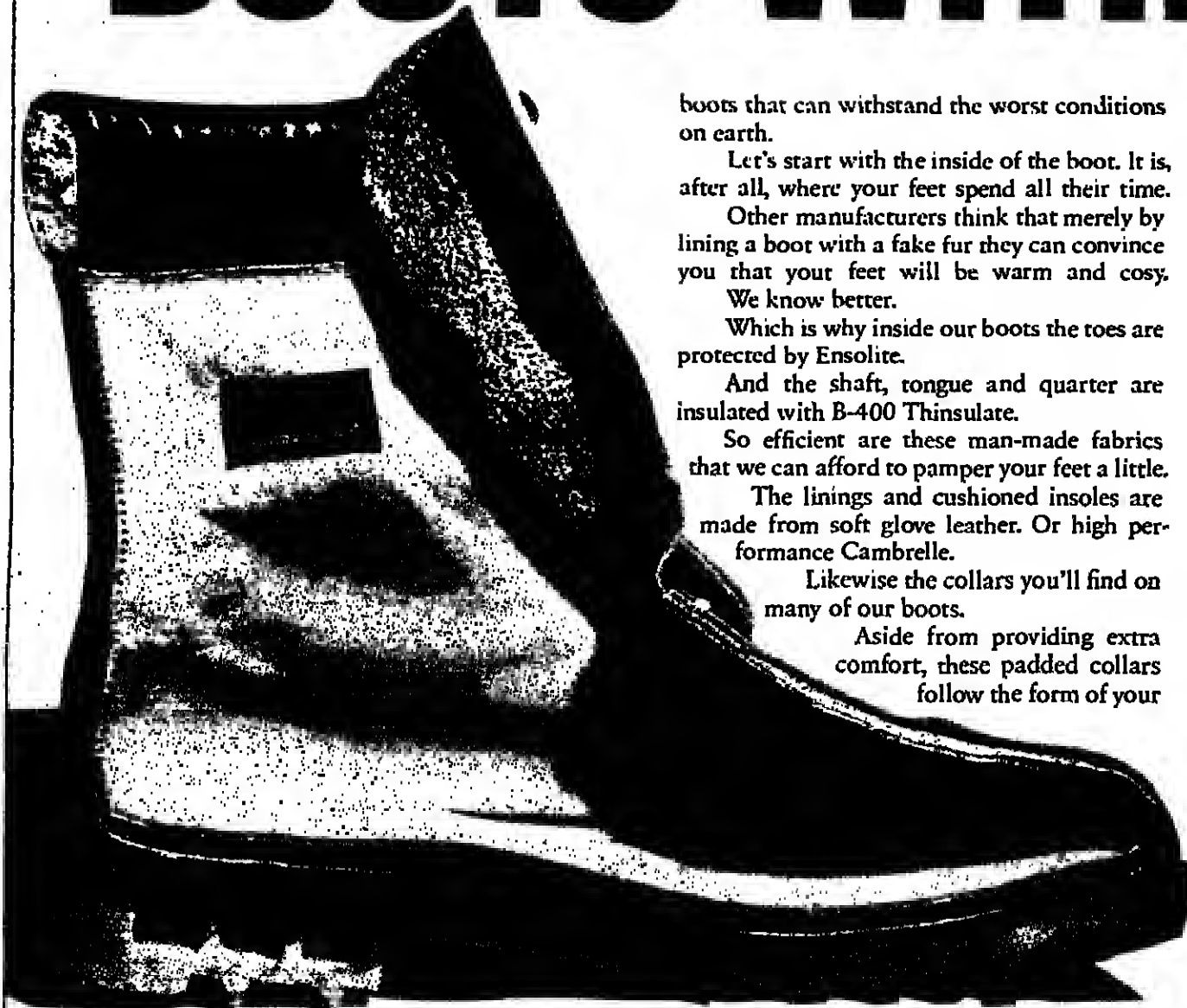
It led to the mobilization of Toyota's most talented engineers and designers, toward a relentless pursuit of perfection to create the world's most advanced high performance luxury car. A dedication to continually improve, perfect and never be satisfied. The result has turned another page in the history of the automobile.

LEXUS
A New Division of Toyota



THIS INS...
effortless...
edges between...
newspaper can...

WE DON'T LINE OUR BOOTS WITH FUR. WE LINE OUR BOOTS WITH BOOT.



boots that can withstand the worst conditions on earth.

Let's start with the inside of the boot. It is, after all, where your feet spend all their time.

Other manufacturers think that merely by lining a boot with a fake fur they can convince you that your feet will be warm and cosy. We know better.

Which is why inside our boots the toes are protected by Ensolite.

And the shaft, tongue and quarter are insulated with B-400 Thinsulate.

So efficient are these man-made fabrics that we can afford to pamper your feet a little.

The linings and cushioned insoles are made from soft glove leather. Or high performance Cambrelle.

Likewise the collars you'll find on many of our boots.

Aside from providing extra comfort, these padded collars follow the form of your

happens water cannot infiltrate the boot.

Our determination to stave off the elements doesn't stop there.

To seal the inside of the boot from the outside world, we use soles made from a lightweight dual-density polyurethane. Or another highly resistant substance called Vibram EVA.

These soles are then permanently bonded to the uppers utilising one of Timberland's many patented processes.

We even add a fibre glass shank along the base of the boot for extra strength.

However good we are at lining the inside of our boots, it would all come to nothing if the outside wasn't up to scratch.

So we comb the country in search of tanneries that understand the importance we attach to the well-being of your feet.

A task made harder by the fact that we're not just picky, we're plain contrary.

We want leathers that are tough yet soft. Strong yet supple. Long-lasting but good-looking. A tall order, we know.

But we rarely come back empty-handed. Once in the workshops, the leathers are impregnated with silicone.

This prevents them drying or cracking with age. It also stops water seeping through. (There we go again.)

We also subject them to a machine called a Maser Flex, which tests waterproof leathers. Ours withstand 15,000 flexes, equal to the highest standards demanded by the US Military.

The same mentality that puts fake fur inside a boot can be counted on to compromise in other ways too.

Nor us. We dye our leathers right through so the colours won't scuff or flake off even after years of regular use.

We use solid brass eyelets. And D-rings made from stainless steel. Neither of them rusts, it's as simple as that.

Laces are made from self-oiling raw hide for extra flexibility. Or premium grade nylon when greater strength is required.

Nothing is over-looked in our desire to build a comfortable, long-lasting boot that protects your feet from the cold.

You may never experience temperatures as low as 20° or 30° below.

But if your feet are soaking wet and numb, who's counting?

Timberland

Have you any idea what happens to the body at 20° or 30° below?

The blood thickens. The brain slows. Your concentration lapses. Energy can drain from you faster than water from an emptying tub.

Of course, the body doesn't take this kind of treatment lying down.

Something called a neuro vascular impulse shunts blood away from your extremities to vital organs like the heart, kidneys and liver.

Which is very clever of it.

Except that a lot of people regard their extremities as pretty vital too.

Particularly their feet.

At Timberland, we make our living making boots and shoes for people who enjoy the great outdoors.

Which, as you can imagine, becomes the not-so great-outdoors when winter sets in.

So how do we protect our customer's feet from the body's natural desire to leave them in the lurch every time there's a cold snap?

We use every material known to man (and some known only to Timberland) to build

ankle to help stop the elements sneaking in.

Keeping the cold air out and the hot air in could have the effect of 'cooking' your feet.

To prevent this, we often drop in a bootie made from Gore-Tex.

This remarkable man-made fibre has 9 billion pores per square inch, each one 20,000 times smaller than a raindrop but 700 times larger than a molecule of perspiration.

As a result, our boots get an extra layer of waterproofing and your feet can breathe more easily.

Even so, any foot couped up in one of our boots is bound to sweat a little.

So to absorb any perspiration, some of our boots are fitted with a special removable polypropylene insole.

Perhaps because Timberlands come from the rainy State of New Hampshire, we set a lot of store by things that keep feet dry.

For example, all the important seams on our boots are stitched using no less than four rows of nylon stitching. We then tape seal them with latex to make sure that whatever

THIS INSIDE of a boot is hardly the most promising of subjects. But this advertisement got you into it. Notice also how effortlessly it dispels our assumption that feet are better off in fur. This is what the written word can do. It builds bridges between products and people. Gets the message over fast and effectively. Timberland shoes used to be cultish. One newspaper campaign later, their name is on everyone's feet. Take a big step forward. Advertise in the newspapers.

**PEOPLE
READ
NEWS-
PAPERS**

This advertisement was placed by the Newspaper Publishers Association.

Welcome to the new world De



From left, Delta Flight Attendant Bonita Caringola, First Officer Timothy Therrell, Captain Larry Bacon and Flight Attendant Stephanie Allen.

On November 1, the world will become smaller, and the atmosphere warmer as Delta Air Lines begins greatly expanded operations across Europe, the Middle East and Asia.

With new transatlantic nonstops

and the establishment of a European hub in Frankfurt, Delta will begin flying from Austria, Belgium, Czechoslovakia, Finland, Greece, Hungary, India, Israel, Italy, Norway, Poland, Portugal, Romania, the Soviet Union,

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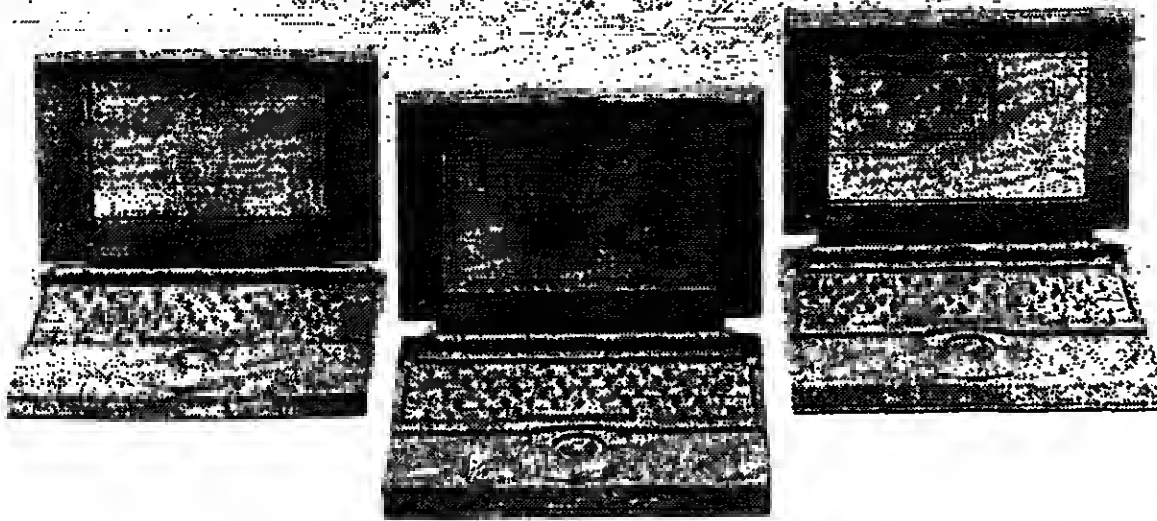
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TECHNOLOGY

Louise Kehoe examines the US computer company's bid to become the market leader in notebook PCs

Three new Apples fall from the tree



Apple's new crop of computers (left to right): the PowerBook 100, PowerBook 170 and PowerBook 140

The portable computer market is "a natural for Apple Computer," claims John Sculley, Apple chairman and chief executive. With the introduction yesterday of three "Macintosh PowerBook" notebook computers, Apple has spearheaded an ambitious bid to become the notebook personal computer market leader.

"We are not saying that we are going to get there in a year, it may take us a while, but that is the objective that we have set," Sculley says. Apple's Macintosh technology, with its graphical user interface and ease-of-use features, is particularly well suited to the portable computer sector, he maintains. "If there was ever a product where ease of use should be a great advantage, it must be in the computer that you carry around with you."

Apple faces formidable competition, however, as a late entrant into an already crowded market dominated by manufacturers of IBM-compatible notebook computers such as Compaq Computer and Toshiba. International Business Machines has also introduced a notebook computer and as many as a dozen other computer manufacturers are expected to weigh into the notebook sector before the end of the year.

Notebook computers represent one of the fastest growing segments of the computer industry, with worldwide sales expected to top 4m units this year, up from less than 3m in 1990, and reach nearly 8m units by 1994. By the mid-1990s, portable computers may account for as much as 50 per cent of the personal computer market according to market analysts.

Prices, however, have tumbled over the past year and discounting is widespread, reflecting generally sluggish market conditions that have prompted personal computer manufacturers to try to boost sales of portable models to make up for slowing shipments of their desktop products.

"We knew when we started developing the PowerBooks that if we were going to do more than catch up, and really kick into the notebook market, we would have to be able to compete on price," says Sculley. "From the very beginning we designed these products so that we could sell at very aggressive prices and still make money."

US list prices for the Macintosh PowerBooks range from \$2,300 for a model 100 with 2Mbytes of memory and a 20 Mbyte hard disc drive to \$4,600 for the top of the line model 170 with 4 Mbytes of memory and a 40 Mbyte hard disc drive.

Sculley maintains, however, that the Macintosh PowerBooks incorporate different features from previous Apple products. "Because we are the only personal computer company that does hardware and software designs we can really make both complement each other, and we have probably never done a better job than we have with the PowerBooks," he claims. The PowerBooks incorporate the

same graphical user interface as desktop Macintosh models, and can run all Macintosh applications programs. Adapting the Macintosh technology to portable computers posed significant design challenges, however.

The computer "mouse", used with Macintosh computers to control movement of the pointer on the computer screen, has been replaced with a built-in "trackball", centred below the keyboard, which - with some practice - can be manipulated with the thumb without lifting the fingers off the keyboard.

With its PowerBooks Apple has introduced an innovative keyboard design with an integral palm rest. The keyboard occupies the back half of the unit, rather than being at the front as in most portable computer designs.

Apple consulted with several ergonomic and medical experts on the keyboard design and the company believes that it has come up with a design that is more comfortable and enables users to keep their wrists in a "neutral" position, avoiding the flexion that some studies have identified as a risk factor in the development of repetitive strain injuries.

In addition, the Apple designers say that the palm rests incorporated in

the PowerBook keyboard facilitate "micro pauses", resting the hand during periods of typing that reduce stress on the user's hands, arms, shoulders and neck. Even when perched on the lap, or set in the confines of an airline seat, the PowerBook can be used without cramping the fingers over the key-

The failure of the Macintosh Portable was 'like a good cold shower' that awakened Apple to the need to accelerate its product development efforts

board in an awkward position.

The weight and size of the Apple notebooks is comparable with that of competing products. The smallest version of the PowerBook, the model 100, weighs in at 5.1 pounds, equipped with 2 Mbytes of internal memory and a 20 Mbyte hard disc drive. But the model 100 lacks a built-in floppy disc drive, and an internal modem is an optional extra.

The model 140 has a built-in floppy drive as well as either a 20 Mbytes or 40 Mbyte hard disc drive. It also has a slightly bigger screen, and weighs 6.5 pounds. It will be priced in the US at \$2,900 to \$3,500 depending upon memory and drive configurations.

The top-of-the-line model 170 features an active matrix display, which gives improved contrast and a broader viewing angle than the liquid crystal displays used in the lower-priced models.

It comes fully loaded with 4 Mbytes of memory, a floppy drive, a 40 Mbyte hard drive and an internal modem for \$4,600.

By launching three notebook models at once, Apple has demonstrated its determination to become a major participant in the portable computer market. If Apple is successful, however, it will be a case of "third time lucky".

Apple's first effort to produce a portable computer was in the early 1980s, when it produced a carry-along version of the Apple II. Eventually, Apple introduced the Apple IIc, a compact desktop model that lacked an integral display unit.

The "Macintosh Portable" announced two years ago was supposed to launch Apple into the laptop

computer market, but its weight and bulk proved unpopular.

A high price tag, in part due to the incorporation of leading edge display technology, was its downfall. Apple this week officially withdrew the product.

The failure of the Macintosh Portable was "like a good cold shower" that awakened Apple to the need to accelerate its product development efforts, "to get products out faster and at much lower cost," says Sculley.

Eighteen months ago, Sculley took charge of Apple's product development himself and adopted the title of chief technical officer. One of his first decisions was to seek outside help from Sony, a long-time supplier to Apple of displays, disc drives and other components.

Sony is manufacturing the PowerBook 100 on Apple's behalf. The Japanese consumer electronics giant also played a leading role in the development of the Apple product.

"It was a question of how many things we could undertake at one time," Sculley recalls. While Apple's own product development groups were focusing on the "start from scratch" projects of designing what were to become the PowerBook 140 and 170 models, Sculley saw the need for a lower-priced entry-level notebook model.

The Sony-Apple alliance, known within Apple as the Asahi project, began in June 1990 when Apple presented Sony with "a half-page specification" based upon the architecture of the Macintosh Portable. Mochi gave and take and many thousands of miles of travel later, Sony recently began manufacturing the PowerBook 100 at its plants in Japan and San Diego, California, last month.

The Apple-Sony alliance "is an indication that if Apple is going to expand its role in the personal computer market, to move out of the sandbox on to the beach, the company will have to have more partnerships with companies that we trust and respect," says Sculley.

He is, however, quick to refute suggestions that Apple's relationship with Sony may expand to become comparable with the company's recently announced alliances with IBM.

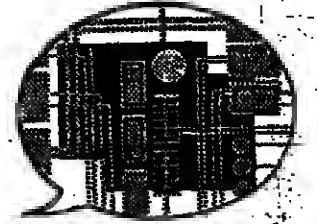
"We have a fine relationship with Sony, but the relationship with IBM is seminal, there will be nothing that compares with it in the 1990s," the Apple chairman stressed.

While Sony is helping Apple to achieve its immediate goal of staking a claim in the notebook computer sector, IBM has become Apple's strategic partner in a long-term bid to create the dominant personal computer architecture of the 1990s and beyond.

For Apple, however, the Macintosh PowerBooks are not just interim products. Apple recognizes that it must quickly become a major force in the notebook computer market if it is to be capable of fully exploiting the opportunities that its new relationship with IBM promises.

The missing link at CTCs

By Andrew Adonis



TECHNICALLY SPEAKING

"A CITY Technology College is a technology-rich environment. The quality of teaching and learning in CTCs is greatly enhanced by the carefully planned use of technology, especially information technology, in all subjects."

So goes the blurb in the framework document for 15 CTCs, set up - or soon to be - under the initiative launched by Kenneth Baker when education secretary in 1988. CTCs were intended to be "beacons of excellence", with private-sector finance bringing high standards and a practical curriculum to Britain's beleaguered inner cities.

In reality, corporate donors have been notably mostly by their absence, with the taxpayer picking up most of the £135m tag for the existing and projected colleges. What about the technology?

CTCs are bound by the national curriculum, and offer much the same range of GCSEs and A-levels as other state schools - though with additions: Business and Technician Education Council vocational courses are on offer in most, and one offers the six-subject international baccalaureate as a broader-based alternative to A-levels.

Beyond that, however, CTCs are keen to stress their practical bias. CTC pupils have to take at least two technology-related subjects up to GCSE, and balanced science is compulsory. All CTCs have lavishly equipped technology facilities - so lavish that there is not always space in the labs for pupils to perform more mundane tasks. Leigh CTC in Darford, Kent, boasts that science and technology occupies half the curriculum, rising to 60 per cent as pupils progress through the college. Computer literacy is "a basic necessity", so is the "very latest" in IT.

"Our college-wide, IBM compatible, industry standard computer network, using Olivetti machines, introduces everything from word-processing to computer-aided design into every aspect of the curriculum," says Leigh's prospectus. In foreign languages, for example, pupils can watch or listen live to 35 TV and radio channels in several languages and use word processing and data-

base packages adapted to language courses.

It is not all science, videos and word processing, however. "In our curriculum, we use CTC language, are integral to the curriculum, and include employer placements, 'citizenship', community service, physical education, clubs, art, and music. The last is taken more seriously than in many state schools these days: Rhythmic Aske's Hatcham CTC, in New Cross, offers free introductory courses of 10 lessons in the full range of instruments, and has some funds available for pupils showing promise but unable to pay for subsequent tuition. Most CTCs schedule enrichment activities for an hour after the end of lessons on a few days a week.

For one CTC which opened last month, the arts are the core curriculum. Britts, in Croydon, south London, is the first "City College for the Technology of the Arts". Catering ultimately for 750 14- to 18-year-olds, it concentrates on the technology of the performing arts - recording, broadcasting, lighting, choreography, theatre management, and so on. "We're not interested in people with masses of tap dancing certificates," says Colleen Hue, Britts's marketing director. "We want people with a keen interest in performance and technology." And they are expected to work hard at it: the school day extends from 8.30 am to 5 pm (1 pm on Fridays).

Are CTCs about to transform the national curriculum? Several of their principals would like to think so. But to date Her Majesty's Inspectorate has reported on only one CTC, Kingshurst in Solihull, and the inspectors were highly critical of its teaching in one area above all - technology.



Treuhandanstalt

Branch Frankfurt/Oder

Second Tender for the sale of companies in the eastern region of BERLIN/GERMANY

Treuhandanstalt Branch Frankfurt/Oder herewith announces the tender for the sale of presently wholly owned companies in the region East of Berlin/Germany, between Berlin and Poland, as listed below (In brackets: type of business, present number of employees and real estate in 1000 square meters):

Civil engineering / Construction

Bauelemente GmbH Möncheberg
Q-1272 Möncheberg
(windows / 20 / 20)
Bauhütte Schwedt GmbH
Q-1300 Schwedt
(construction, reconstruction / 85 / 14)
Baureparaturen Wenditz GmbH
Q-1292 Wenditz
(civil engineering, construction / 12 / 20)
Bauunternehmen Oder-Spreewerke
Marketing und Bauver. GmbH
Q-1200 Frankfurt (Oder)
(civil engineering, construction / 2007 / 840)

Hochbau Frankfurt (Oder) GmbH
- Bauunternehmen Oder-Spreewerke
Q-1200 Frankfurt (Oder)
(construction / 777 / 364)

Ingenieur- und Bau Eberswalde GmbH
Q-1300 Eberswalde-Finow
(civil engineering, water engineering / 435 / 68)

Kreisbau GmbH Beeskow
Q-1230 Beeskow
(civil engineering / 17 / 10)

Märkische Bau AG
Q-1513 Wriezen
(civil engineering, construction / 941 / 449)

Märkische Gebäudetechnik GmbH
Q-1262 Hennickendorf
(sanitary installation / 360 / 88)

STREBEDT Ingenieurhochbau GmbH
Q-1300 Eberswalde-Finow
(construction / 588 / 91)

Templiner Tiefbau GmbH
Q-2090 Templin
(civil engineering, construction material trade / 78 / 63)

Tief-, Wasser- und Ökobau GmbH
Q-1510 Bad Freienwalde
(civil and water engineering / 645 / 264)

Construction materials

Bad Freienwalder Feuerfest-Werke GmbH
Q-1510 Bad Freienwalde
(fireproof ceramics / 279 / 14)
Betonwaren- und Vertriebs GmbH
Q-1220 Eisenhüttenstadt
(concrete stones / 86 / 134)

Oder-Spreewerke Betonfertigteilewerke GmbH
- Bauunternehmen Oder-Spreewerke
Q-1220 Eisenhüttenstadt
(concrete elements / 358 / 310)

Consulting

Architektur- und Ingenieur-Consult Eisenhüttenstadt GmbH
Q-1220 Eisenhüttenstadt
(civil consulting engineers / 98 / 6)

Ingenieurbüro Metallbau Eisenhüttenstadt GmbH
Q-1220 Eisenhüttenstadt
(steel construction consulting / 7 / 0)

Design

Design-Frankfurter Werkstätten GmbH
Q-1200 Frankfurt (Oder)
(advertising / 5 / 0)

Dienstleistungs-GmbH
Q-1300 Eberswalde-Finow
(electrical appliances trade / 193 / 24)

G. Schwedt-Schul-Wohnungs GmbH
Q-1830 Schwedt
(housing administration / 5 / 0)

Versorgungs- und Gemeinschafts-einrichtungen GmbH
Q-1200 Frankfurt (Oder)
(heating power station, railroad center / 14 / 33)

Wood / Furniture

Märkische Holz GmbH
Q-1291 Neuhausen
(interior wood installations / 89 / 16)

Möbelwerke Frankfurt (Oder) GmbH
Q-1200 Frankfurt (Oder)
(furniture / 483 / 63)

Machine tools / Metal working

Armaturenwerk Kietz GmbH
Q-1211 Kietz
(brass pieces / 21 / 2)

Blackpackwerk Eberswalde / Britz GmbH
Q-1306 Britz
(packaging / 4 / 87)

CTA Apparaturen GmbH
Q-1240 Fürstenwalde
(containers, tanks / 588 / 250)

Fahrzeug und Maschinen GmbH
Q-1301 Lüdersdorf
(agricultural machine maintenance / 29 / 23)

Finow-Stahl GmbH
Q-1300 Eberswalde
(steel and alu construction, steel ropes / 67 / 6)

FORST maschinen-geräte-service GmbH
Q-1300 Eberswalde-Finow
(forestry machines / 21 / 16)

Mechanische Fertigungs- u. Vertriebs GmbH
Q-1301 Friedrichshagen
(general metal working / 20 / 10)

MeTec GmbH
Q-1291 Ahrenshoop
(general metal working / 19 / 0)

Rationalisierungs- u. Maschinenbau

GmbH
Q-1200 Frankfurt (Oder)
(general machine construction / 68 / 16)

Foodstuffs

Fruchteln Barmen GmbH
Q-1291 Barmen
(eggs, poultry / 83 / 1023)

Fürstenerberger Fleischwaren GmbH
Q-1220 Eisenhüttenstadt
(meat slaughtering and processing / 548 / 46)

Mühlwerke Müllrose GmbH
Q-1203 Müllrose
(grain mill / 90 / 67)

Wriezen Getränke GmbH
Q-1313 Wriezen
(softdrink trading / 43 / 4)

Animal feed

Biesenfelder Mischfutter GmbH
Q-1296 Biesenfeld
(animal feed products / 92 / 39)

Frankfurter Kraftfutterwerk-Ges. mbH
Q-1200 Frankfurt (Oder)
(animal feed products / 42 / 12)

Miscellaneous

Biomedelle GmbH Schönwalde
Q-1291 Schönwalde
(breeding of laboratory animals / 27 / 37)

Elektromechanik Lychen GmbH
Q-2063 Lychen
(electrical motors / 101 / 23)

Prenzlauer Glasverarbeitung GmbH
Q-2130 Prenzlau
(window glass construction / 18 / 3)

Tender conditions:

- Everybody is entitled to bid. Bids are to be for the total share capital of the company. All offered companies are in the legal form of a limited liability company (GmbH) or stock company (AG) and are of small and medium size. They are all located in the region East of Berlin, between Berlin and Poland. All companies are presently wholly owned by the Treuhandanstalt. Previous owners, if become known, will be treated according to the applicable law.
- Each bidder is requested to make his own physical inspection and assessment of the company. The managers of the companies have been instructed to provide each and every information required by bidders duly authorized.
- The written authorization to visit the companies incl. address will be given only at the Treuhandbranch Frankfurt/Oder. Office hours Monday through Friday 8 a. m. to 4 p. m.
- Closing date for the bids is November 28, 1991, at 2 p. m. Bids are to be submitted to Treuhandbranch Frankfurt/Oder, Tenderbox of a notary public. Bids by registered mail must arrive latest by that date. The bids will be opened immediately thereafter in the presence of a notary public.
- Bids are to be submitted in a sealed envelope marked with the name of the company for which the bid is submitted.
- Bids are to be in Deutsche Mark and valid for ninety days after closing date.
- The bids have to include a statement on the intentions of the bidder regarding the envisaged future of the company, e.g. continuation in its present form, change of product line, mergers etc. To be included are also investment and employment forecasts for the next three years.
- Bids have to be accompanied by a bid bond of five percent of bid value in the form of an irrevocable bank guarantee valid for ninety days after closing date. The bid bond will be returned to the unsuccessful bidders immediately after the final decision is made. The bid bond will be retained if the successful bidder fails to accept the decision.
- Decisions on the bids will be made by the Treuhandanstalt Frankfurt/Oder. Treuhandanstalt is not bound to accept the highest or any company will be evaluated if submitted together with the bid.

These tender conditions are translated from the German language. In case of dispute the German wording will prevail.

When contacting the Treuhandanstalt Frankfurt/Oder, please use telex or fax rather than mail.

Hans H. Lürken Director Treuhandanstalt Branch Frankfurt/Oder

Treuhandanstalt

Branch Frankfurt/Oder

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FT LAW REPORTS

Writ can be served by agreement

**KENNETH ALLISON LTD v
A E LIMEHOUSE & Co**
House of Lords
Lord Bridge of Harwich, Lord
Templeman, Lord Goff of
Chelmsford, Lord Jauncey of
Tulcheth and Lord Lowry
October 17 1991

A WRIT may be effectively served on a defendant to contractual or non-contractual litigation if served, not in accordance with the Supreme Court Rules, but in the manner and at the place agreed between the parties, irrespective of whether they are agreed for the purpose of that particular litigation, or as part of a wider agreement relating to disputes between the parties in general.

The House of Lords so held when allowing an appeal by the plaintiffs, Kenneth Allison Ltd, from a Court of Appeal decision (Lord Donaldson MR dissenting) that a writ had not been duly served by Allison on the defendant, A E Limehouse & Co.

LORD BRIDGE said that Limehouse were chartered accountants. On October 5 1987 Allison issued a writ against them claiming damages for negligence in carrying out an audit.

On October 4 1988, the last day of the currency of the writ, a Mr Swann attended Limehouse's offices to serve the writ.

The receptionist called the senior partner's personal assistant, a Mrs Morgan, to the reception area. Mr Swann showed her the writ.

She told him she would have to refer the matter to a partner. She left him in the reception area and went to speak to a partner, Mr Hall, who told her she might accept the writ.

Mr Morgan returned to the reception area. She told Mr Swann she had been authorised to accept the writ. She received from him a sealed copy of the writ and a form of acknowledgement of service.

Limehouse applied for an order setting aside service or declaring that the writ had not been duly served. The application was dismissed by Mr District Registrar Rutherford, but allowed on appeal by Mr Justice McCullough. Allison's appeal was dismissed by the Court of Appeal, Lord Donaldson MR dissenting.

Allison now appealed.

The question was whether the Rules of the Supreme Court relating to service constituted an exclusive code for effective service, or whether, if parties agreed on a mode of service outside the Rules, service in that mode ("consensual service") would be effective.

RSC Order 10 rule 1(1) provided that "a writ must be served personally". Sub rules (2)(3) and (4) provided for service by post or through a letter box, or on a solicitor.

Order 60 rule 2 provided that "personal service... is effected by leaving a copy of the document with the person to be served".

Where, as here, partners were sued in the name of a firm, Order 61 rule 3 provided that the writ might be served on any one or more of the partners, or by post to the principal place of business or on any person having control or management of the partnership business.

Mr Vallance for Allison submitted that the writ was served personally on Mr Hall.

That was not accepted. Personal service required that the document be handed to the person to be served.

It followed that Mr Vallance must rely on Mr Hall's express authorisation to Mrs Morgan to accept service on his behalf, which was communicated to and acted on by Mr Swann when he handed the writ to Mrs Morgan.

The relevant decisions were in relation to the 1983 Rules, which provided by Order 1X rules 1 and 2 that the court might order substituted service where a plaintiff was unable to effect personal service. By rule 1X service out of the jurisdiction was allowed in a contract case "unless the defendant is domiciled or ordinarily resident in Scotland or Ireland".

In *Montgomery Jones & Co/1989/1 QB 487* a contract between an English company and a Scottish company provided that for the purpose of legal proceedings service on the Scottish company might be effected at the London Corn Trade Association.

Counsel argued that service was not valid unless effected according to the Rules. The Court of Appeal held that there was nothing in the Rules to prevent the parties from agreeing the manner of service.

Mr Dowley for Limehouse accepted that *Montgomery* was

correct but submitted that the principle must be limited to cases where agreement as to mode of service was embodied in a wider contract and provided for institution of proceedings relating to that contract.

It did not apply, he submitted, to an *ad hoc* agreement made in relation to other contemplated proceedings.

There was no good reason in principle for making that distinction.

If the rules in force in 1988 did not prohibit parties in the contemplated litigation from effecting service in a manner agreed between themselves, there was no ground for saying that an *ad hoc* agreement specifically relating to mode of service would, at that date, have been any less effective than an agreement embodied in a wider contract.

No doubt if the present case had come before the court in 1988, validity of the service would have been affirmed.

The question was whether subsequent changes in the Rules had introduced a prohibition on consensual service.

In 1990 a new rule 2A provided that parties to a contract might agree that the High Court should have jurisdiction in that contract and that service might be effected within or outside the jurisdiction in any specified manner.

It was a formal adoption and an extended application of the *Montgomery Jones* principle.

The 1983 revision substituted for Order 1X rule 2A a new Order 10 rule 3. It provided that where the High Court had jurisdiction to hear a contract case and the parties had agreed that a writ might be served in a specified manner and it was served in accordance with the agreement, then "notwithstanding anything in rule 1(1)... the writ shall be deemed to have been duly served".

Order 10 rule 3 of the 1985 revision provided that where a contract contained a term that the High Court should have jurisdiction and provided that that process might be served in a specified manner, service in accordance with the contract "shall... be deemed to have been duly served".

The crucial question was whether the express provision in the Rules for consensual service in contract cases excluded consensual service in any other case.

In the light of the legislative history it did not.

The general approval given by the Court of Appeal in *Montgomery Jones* to consensual service outside the Rules must have been perfectly well known to the revisers and, if they had intended to curtail it, they would have effected that intention directly and unambiguously.

It was said it was necessary to require strict adherence to the Rules in order to achieve certainty with respect to date of service.

There was no reason why it should be more difficult to establish the date of consensual service than of personal service. There was certainly no difficulty in the present case.

Lord Donaldson summed the matter up correctly when he said: "The Rules are the servants of the courts and of their customers, not their masters, unless expressed in a wholly mandatory and exclusive fashion, which these rules are not."

The appeal was allowed.

LORD TEMPLEMAN, LORD JAUNCEY and LORD LOWRY agreed.

LORD GOFF agreeing that the appeal should be allowed but on different grounds, said that Order 10 rule 1(1) was expressed in mandatory terms: "a writ must be served personally on each defendant by the plaintiff or his agent".

It was important that those concerned at court offices should know precisely what mode of service had been adopted. It was not surprising that the rules should provide for a mandatory method of service.

Effect must be given to the Rules in accordance with their terms.

Here there was no good and effective service in accordance with the Rules.

But Mr Hall and Allison acting through Mr Swann, proceeded on the common but mistaken assumption that service on Mr Hall's authorised agent would constitute good and effective service.

On those facts Limehouse would be estopped by convention from thereafter contending that there was not good and effective service.

For Allison: Philip Vallance QC (Gregory Rowcliffe & Milners).
For Limehouse: Dominic Dowley (Pinsent & Co).

Rachel Davies
Barrister

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MANAGEMENT: The Growing Business

In brief...

■ Nine London-based Training and Enterprise Councils (Tecs) have combined to provide £25,000 of sponsorship for the Accelerated Growth Programme, aimed at managers of established businesses, run by Greater London Enterprise.

Similar courses run by management schools and colleges elsewhere have had to be cancelled following the failure of local Tecs to provide funding for courses which attract students from outside the Tec area. The London Tecs will fund managers from companies in their areas.

Managers from 20 companies are attending the present course. The sponsors are meeting £1,250 of the £1,750 fee. The next course is due to start in spring 1992.

■ Small accountancy firms frequently find themselves advising small businesses in sectors of industry and commerce with which they - the accountants - are not familiar.

A series of Small Business Briefings providing information on business trends and accounting and tax requirements in 40 business sectors has been published by Manchester Business School to allow the accountants to take a more professional approach to these clients.

The series includes briefings on architects, building contractors, the retail motor trade and travel agents. The launch set of 40 briefings cost £55. At least 20 will be updated annually. The 1992 subscription price is expected to be about £65.

■ National Westminster Bank has published a handbook for would-be small business owners entitled *The Business Start-up Guide*.

The 54-page guide includes the outline framework for a business plan and devotes sections to the implications of setting up in business, sources of advice and legal questions.

Available from NatWest branches. Free.

Charles Batchelor on the problems of complying with a tough new Customs & Excise tax regime

When the VATman gives no quarter

The margins on the four dump-trucks Aubrey Mace bought and sold last October were slim to start with. By the time Customs & Excise had slapped on a penalty for "serious misdeclaration" for failing to abide by the VAT rules and charged default interest, Mace was seriously into the red on the deal.

Mace is doubly annoyed because, he says, there was no deliberate attempt to defraud and there was no suggestion that the VATman would lose out. Mace's fault was one of timing; he registered the deal for VAT purposes in the wrong quarter.

The details are as follows. Mace bought the dump-trucks on October 26 for £280,000 plus VAT of £39,000. He sold them two days later - on the 28th - for a profit of £4,000 and booked the sale through his VAT records in the VAT quarter ending October 31.

"I sent the VAT book away and didn't think any more about it," says Mace, who deals in second-hand construction equipment from his farm just outside St Austell, Cornwall. The equipment business turned over £2m last year.

But Mace had overlooked a detail of the VAT regulations, says Chris Allen, head of VAT consultancy at accountants Grant Thornton, which provides VAT advice to Mace's own accountant. In principle, the date a deal is done is taken as the tax point for VAT purposes - unless the supplier issues an invoice within 14 days, in which case the date of invoice must be used.

The company from which Mace bought the dumpers issued its invoice within 14 days - on November 2 - so Mace should have listed the deal in the next quarter, ending January 31. For this oversight, which did not deprive the VATman of revenue, Mace was required to pay a serious misdeclaration penalty of £11,700 (a standard 50 per cent of the VAT involved) and default interest of 8 per cent.

Aubrey Mace is just one

among many hundreds of businessmen and women to feel the effects of the tougher VAT enforcement regime which has been progressively introduced over the past five years. The final stage, in April 1990, brought in tough new penalties to make sure people filled in their VAT returns accurately.

It was this final stage, and in particular the serious misdeclaration penalty of 50 per cent of unpaid VAT, which has aroused the loudest howl of protest from the business community and the accountants who advise them. So strong was the clamour that Norman Lamont, the chancellor, announced in his last budget that the penalty would be reduced to 20 per cent pending a review of the system.

Customs said it had received "several hundred" submissions by the closing date of September 30 while organisations such as the Institute of Directors (IoD) say the issue of VAT penalties has produced a heavier potholing than any other tax issue.

Apart from the very smallest businesses - those with turnover of less than £35,000 - VAT catches firms of all sizes in its net. But it is the small and medium-sized businesses which face the greatest problems in dealing with the complexities of tax.

As governments have delegated more of the administrative burden to business, small business owners have had to devote a disproportionate amount of their time to dealing with tax issues.

Governments bear only one-fifth of the cost of collecting taxes so have little incentive to reduce the cost of compliance, according to a Europe-wide survey carried out by Graham Bannock & Partners, a consultancy.

"Traders and their staff are not, as the law seems to expect, experts in the complex VAT tax law," the IoD argued in its submission to Customs. Even if they were, unintentional mistakes and genuine misinterpretations of the law would still take place.

Since small businesses receive fewer visits from the VATman than larger companies, errors may be repeated over several years before they are discovered, thus compounding the amount of the discrepancy and the size of the penalty.

The intricacies of the VAT regulations have proved particularly taxing for the building industry, where large numbers of often financially unsophisticated subcontractors have run into difficulties over VAT rates, says Liz Bridge, secretary to the construction industry's joint taxation committee.

Subcontract work on a house-building project is zero-rated for VAT but subcontractors working on sheltered housing schemes must charge VAT at the standard rate of 17.5 per cent on the work they do for the main contractor.

One subcontractor is currently facing a penalty of £69,000 despite the fact that he was assured by the main contractor that the work was zero-rated, while Customs did not stand to lose any revenue as a result of the mistake.

"We have been through six months of absolute hell," he says. "The subcontractor has no way of knowing what the VAT rating is. If I went to the main contractor and asked him the work was VAT-able he would throw me off the site. This all costs time and leads to bigger accountants' bills."

The main complaint of the business community is the lack of "mitigation" in the present penalty regime. Businesses cannot argue for a reduction in the penalty even if the circumstances of the VAT misdeclaration would appear to warrant leniency.

The present regime is so seriously flawed that it has brought the penalty system, and its administration by Customs, into public dispute, the Institute of Chartered Accountants in England and Wales (ICAEW), argued in its submission to government. The penalties were often disproportionate to the nature of the error and produced no incentive to comply.



Aubrey Mace: doubly annoyed

London head office currently handles 200,000 telephone queries and 6,000 to 7,000 written enquiries a year. It believes that many of these could be dealt with by local offices, freeing headquarters to devote more time to policy-making and to providing better guidance to local offices.

However, many accountants fear that unless local officers are properly trained, decentralisation will mean less consistency in the interpretation of the rules and ultimately an increase in the number of disputes going to VAT tribunals.

Even written advice from a VAT officer cannot always be relied on if a dispute goes to a tribunal, complains Tony Miller, financial affairs committee chairman of the Federation of Small Businesses. "Customs seems to take the view that it is not there to provide advice. It is a system that it has imposed on us but we have the dubious pleasure of paying an accountant to ensure we are following the law."

The burden of complying with tax law is set to increase rather than diminish over the next few years. The Inland Revenue's plans to move to a system of self-assessment, known as "pay and file", from 1993 will add to the demands on the business community during the change-over period. Keeping the taxman happy is going to take an even larger amount of time.

Pinter principle of persuading prospects

By Charles Batchelor

The British have an ingrained suspicion of salesmen; they prefer, in theory at least, the noble task of manufacturing to the slightly mucky business of selling. This may explain why the authors of four of the six books reviewed here are North American or have North American business experience.

Only two of the handbooks are specifically designed for the small business owner but each contains useful tips for the person with a product or a service to sell. Collectively they provide an intriguing glimpse of a world which divides people into suspects (not ready to buy yet) and prospects (who are willing and able to buy) and where casual conversations are scrutinised with Pinteresque intensity to divine their message and the likelihood of clinching a sale.

The title of *Inspired Selling* (JT Auer, Kogan Page, 150 pages, £7.99) may itself prove a deterrent to some would-be readers but this guide is both the most readable of the quartet written for the individual salesman and also the most informative.

Do not run away from objections; confront them, says Auer. Your prospect thinks a competitor's machines are more efficient? Ask him if he will give you the order if you can prove your machines are better. He can hardly say no since you are promising to meet his objection. Provided you can demonstrate the efficiency of your machine, and your trailing should have prepared you to do this, the sale should be yours.

Sales Master Class, 80 Essential Tips for Serious Salespeople (Nigel Hensell-Thomas, Hutchinson, 238 pages, £5.99) makes the reader work harder for his nuggets of information. Too often advice remains on the level of general good sense and fails to provide enough significant detail and useful anecdote.

The 25 Most Common Sales Mistakes and How to Avoid Them (Stephen Schiffman, Kogan Page, 112 pages, £5.99) continues the previous book's obsession with numbers but is more successful within its more modest aims. Keep in touch with the business affairs of your prospective customers and of their industries, it advises under mistake 16: not keeping up-to-date. A courier company could have sold its services to a large company much sooner if it had been aware that a rival of the potential customer had begun to use couriers.

Techniques for cold calling, frequently as daunting for the salesperson as it is annoying to the recipient, are explained in *Selling Professionally* (Rebecca Morgan, Kogan Page, 102 pages, £5.99). Success, it appears, requires the salesperson to avoid undue familiarity but at the same time not give the prospect's secretary the impression that he does not know the prospect at all.

This is a compilation of basic but quite useful suggestions on technique. Avoid conversation stoppers such as "You don't know me but..." when telephoning an adviser.

The Barclays Guide to Buying and Selling for the Small Business (John Gammon, Blackwell, 184 pages, £6.95) also contains useful tips for the individual salesperson but concentrates on sales strategies for the small business.

It too picks up the theme that information can increase confidence and sales. It cites the case of the owner of a small hardware store who was faced with the opening of several large DIY stores in his area. He checked the prices of the large stores and found that his own were competitive. This allowed him to give a good answer on the few occasions when customers challenged his prices and increased his confidence in the consumer appeal of his products.

This guide offers a combination of concise explanations of the theory combined with examples of how the strategies work in practice.

How to Increase Sales with One-on-One Selling (John O'Keefe, Edward Arnold, 162 pages, £7.99) also takes a broader view of selling and devotes much space to subjects such as advertising, the use of mailshots and public relations. Short on the inspirational approach which drives JT Auer's encounters with his customers, it provides a workmanlike account of how to sell without ever meeting your prospects face to face.

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KPMG Corporate Recovery**Sale of London Coaches Limited**

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Coopers & Lybrand Deloitte
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All enquiries to Roger M. Griffiths, Joint Administrative Receiver, Ernst & Young, Central Exchange Buildings, 93A Grey Street, Newcastle upon Tyne NE1 6EL. Telephone: 0911 221 1222. Fax: 0911 261 2916.

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ARTS

Sculpture married to architecture

William Packer reviews Anthony Caro

At 67, Anthony Caro is now generally acknowledged as pre-eminent in his field, the one British sculptor of unquestioned international authority and reputation. Since the death of Henry Moore five years ago, whose assistant he had been in the early 1950s, he has stood quite alone, and indeed bestrode his narrow world long before that. If Moore was over the old King in his castle at Much Hadham, Caro was Prince Hal, commanding his own generation, creating the new order, setting the pace.

Yet it all happened for him very quickly. The Tate bought his first Caro, a figurative work of the mid 1950s, in 1958. A year later he was back from a first visit to America already the friend and colleague of his new-found American peers, most especially the critic Clement Greenberg, the sculptor, David Smith, and the painter, Kenneth Noland. He began at once to make welded-steel sculpture of an uncompromising abstraction, and as soon was famous. Major one-man and group exhibitions followed in close order, culminating in 1969 in the retrospective that was the Hayward Gallery's inaugural exhibition.

Since then, surprisingly, while the career has prospered wonderfully at home and abroad, the Tate, though continuing to acquire examples of his work throughout, has waited until now to offer him a significant solo exhibition. Thus *Sculpture towards Architecture*, which fills the long central axis of the Tate with a mere four works (until January 28, sponsored by KPMG Management Consulting), is necessarily an event of considerable interest and even importance.

Small wonder then that others should take their chance to mount pendant shows: Anneli Juda Fine Art (23 Derings Street W1, until November 30) and Andre Estimier (41 East 57th Street, New York, until November 16) show works from the recent *Cascades* series in tandem; and Knodler (22 Cork Street, until November 16) has two large pieces, of 1974 and 1987.

Caro has long professed, indeed demonstrated his interest in the consonance between sculpture and architecture. He has done so not merely by simple reference through the inner structure and integral order of the works themselves, but often in the most direct and practical

of ways, working closely with architects from the outset of any particular project. What the Tate offers him is the chance to work on a scale not merely architectural but monumentally so.

The high colonnaded neo-classicism of the Tate's Duveen Galleries offer a challenge which Caro has met head-on, in the central octagon, with his own *Octagon Tower/Tower of Discovery*, a wonky swirling edifice that the visitor may climb, with some care, to view the long halls far below. He has made several such overtly architectural pieces in recent years, redolent of shacks and tree-houses, albeit of heavy metal. This one also carries clear hints at Tallin's *Tower* and Boccioni's futuristic figures, for Caro is much given to architectural allusion.

But if the tower is immediately the more striking, the more massive is *After Olympia*, some 25 yards long, made in 1987 in conscious paraphrase of the west pediment of the Temple of Zeus, now in the Olympia Museum. It is long, low and narrow, and would be in high relief were it set in its natural position on the Temple front. The other works, *Night Movements* - four free-standing related elements of 1990 - and *Xanadu* - a kind of metal hedge or fence of 1988 - huge as they are, seem small by comparison.

But all of them demonstrate Caro's remarkable formal command of his material, his compositional dexterity and assurance, his unfailing lightness of touch and formal wit. The intractable steel is bent, folded, cut like butter, the particular off-cut, fragment, remnant, picked up and put in its place, just so. Such facility is enviable, indeed amounts to true quality, but it remains a formal quality, and it is here that we enter more debatable territory.

For Caro came into his own by his rejection of an openly subjective and personal expression in favour of something infinitely more remote, impersonal, cerebral. All hint of figurative reference was given up, and any humanity that remained was only what the viewer might bring with him, in terms of a scale with which he might identify, and the spaces and structures he might move through and around in his imagination - like architecture. Quite why Caro felt the need to make this rejection, with its infinitude of emotional



'Octagon Tower/Tower of Discovery', 1991, by Anthony Caro: one of four monumental pieces currently at the Tate

response and possibility, which Moore, his sometime mentor, could never make, who would say?

All one can say is that formalist principles were in the air. The time was ripe for such a move, and Caro was by no means alone in making it. Figurative or abstract, the common move was away from untidy and discomposing expressionism, with Andy Warhol quite as much a fellow traveller as any Noland, Stella or Anthony Caro. And the problem with Caro, as with all those others, is that he has been engaged in an intuitive yet inhibited withdrawal from that cool, theoretical position ever since.

He would still have it both ways, vehemently retaining the very idea that his works are about anything other

than what they are in their physical being, yet provoking the imagination by the suggestive perversity of his titles, and producing images that are undeniable in the imaginative associations - to landscape, figures, still-life - that they generate. The *Cascades* at Anneli Juda make the point as clear as could be, images of falling movement, of water, ice, a branch, the cloth of the table, and all done with an elegance of functional invention and transformation that is quite remarkable.

Anthony Caro remains the consummate, inventive formalist he has been these 30 years past, but Caro the figurative, expressive, truly free and intuitive artist was never away, only suppressed. It is time he came out.

Die Walküre

THEATRE ROYAL, GLASGOW

The new Scottish Opera *Ring* reached its second part on Saturday, with a *Walküre* that to our enraptured ears and eyes opened new worlds of colour, fantasy, narrative illumination, new routes of approach to Wagnerian music-drama. A few means will be omitted during the course of this notice: but the biggest of them concerns the time it has taken to arrive from the triumphant 1989 *Rheingold* at this brilliant and beautiful new *Walküre* (and the production of *Siegfried* threatens to be similarly delayed).

That's far, far too protracted a building time-scheme. For without doubt this is proving the era's trend-setting *Ring*, in this country and perhaps even elsewhere, and in spite of all the company's current monetary agonies, ways must be found for Scottish Opera to move faster ahead on the project, freely and without delay. The story of that *Rheingold* was no fluke. Richard Jones (producer) and Nigel Lowery (designer) make the point by taking the same theatrical style introduced there - a dazzling mixture of bright poster-past colours, images, child-like in vividness, a semi-surreal control of theatrical space and symbols, and the sharpest-pointed narrative economy - and developing it to suit the grander and more ornate journey can hardly be over-emphasised.

The unfolding of a new *Walküre* is always a momentous happening in the life of any opera company. Not every thing can be expected to come right, especially if, as here, conductor and cast are tackling the work for the first time in the theatre. This will place in perspective Saturday's most important disappointment: the conducting of John Mauceri and the playing (too often scratchy and unbalanced) of the orchestra. Mr Mauceri, who made the *Ring* prelude dance and sparkle, seems quite overwhelmed by the greater demands of *Die Walküre*. A lack of weight - which, in this ideally medium-sized theatre, should be much more easily compassed - went hand in hand with a failure to grade each of the mighty act-spans toward climax. Little things were sometimes sensitively achieved; largeness proved elin-

sive. Perhaps it is because the conducting falters in holding taut the unfolding line of drama that one continually registers the erratic command of German by an entirely English-speaking set of principals. (Was there a language coach on set?) The three young Americans of the cast - John Keyes (Siegfried), Carol Yahr (Sieglinde), and Kevin Maynor (a pleasant-sounding, insufficiently imposing Hunding) - tend to pronounce, not always accurately, rather than speak idiomatically in song; Jane Eaglen's Brünnhilde gabbles; and only Willard White (Wotan) and Sally Burgess (a sensationally glamorous, bold-voiced Fricka) show any sort of skill in striking fire from words and tone.

No doubt matters will improve; already the vocal rightness of the entire cast and the sympathetic characterisation of almost all count as considerable compensation. Mr White closed the evening with a Farewell - rich, warm, glorious in emotional power and musical shapeliness - that surpassed the highest expectations. He is a superb artist approaching the peak of his mature powers, and once he has learned to pace himself more cunningly through the whole opera, his addition to the ranks of world-class *Walküre* Wotans will be a cause of universal celebration.

To discover two such promising Wagner voices, full-grained, smooth in legato, free from humps and grinds, as those of Miss Yahr and Mr Keyes is a Scottish Opera coup. Miss Eaglen in her first Wagnerian dramatic-soprano role must be judged with a Solomon's bleed of tenderness and severity. After a nervous warty the voice began to ring out with a clarion freedom that soon had onsets reaching for hasty comparisons with Eva Turner. In terms of personality, though, she shows us an uncommunicative Brünnhilde - the problem is not the soprano's figure, rather her constrained stage manner and address. Of a young British singer so boundless in potential we can be forgiven for intemperately demanding much more.

Max Loppert



David Murray Jane Eaglen and Willard White as Brünnhilde and Wotan

The Hang of the Gaol

LATCHMERE THEATRE, BATTERSEA

In some respects this 1978 play by Howard Barker seems very topical, and in others it is as dated as the blasts of punk music which punctuate the scenes. All ways round, it is a vigorous and colourful piece of writing which crowds the stage political conscience, reminding one how this talented maverick came to be wrongly bracketed in so many minds with the state-of-the-nation playwrights of the 1970s.

Barker's setting is a burnt-out jail in the aftermath of the Inferno. Five investigators poke around the charred remains as the two remaining "screws" try to effect a ritual defecation in the ruins and an inquiry is set in motion. The prison governor is a liberal, who has befriended a fugitive murderer, Turk, played with high cunning by Jonathan Coyne, is one of several overtly Shakespearean characters - a cross between Lear's fool and Caliban, whose presence emphasises the gullibility of authority while underlining Barker's obsession with the power - and impotence - of language. "Tell 'em in Whitehall there is no recoupling of the sword with a killing in the testicles," is Turk's final, unhappy retort.

What has dated is not so much the play's subject matter - prison riots and overcrowding are, if anything, bigger news today - as the way in which the issues are personified. After more than a decade of Thatcher

as Aunt Sally, it comes as a shock to find the principal political villain is a smarmy socialist in a raincoat, who talks man of the people while acting establishment squire.

At heart this is a homily about integrity versus state service. In the best scene of the play, cracklingly directed by Chris Fisher, the fragility of that integrity is illustrated through the cross-questioning of the panel. Brandishing a whisky bottle, Michael Vaughan's inspector loses himself in his infatuation with his female colleague, allowing a clerical pipsqueak to explode into a fascist interrogation, while the unfortunate woman who is the object of Jardine's tipsy fancy fidgets with professional and sexual discomfiture. Yet Jardine, as Vaughan shows so well, is a man of principle and intelligence who knows when he is being knocked.

It is downhill from then on in, as Barker gets ever more self-indulgent, although one can forgive him a lot for the breadth of his vision and the unflagging energy of his writing. And the London Actors Company throw the sort of resources into this revival that only Barker and Shakespeare can command. Twelve actors in a fringe play. Now, that's really dated.

Claire Armitstead

Feldman Soloists

ALMEIDA THEATRE, ISLINGTON

Any Londoner who follows new music must feel the loss of the annual Almeida Festival solely. It was an open Continental window, and a showcase for fresh British composers, and a trans-Atlantic conduit too. Still, the new Almeida directors keep creditable room during the season for music in the old Almeida spirit; just now there is a mini-festival going on (until November 24, with Goethe Institute sponsorship), "A German Legacy". The Feldman Soloists and their guests, who offered "A Berlin Legacy" on Sunday afternoon, recalled the best of the old festival.

The ensemble takes its name from the late American composer Morton Feldman, and between the two intervals we duly heard his 1972 piece *Why Patterns?* It occupied most of half an hour, very very gently. Long, mostly even notes from the central flute - often in descending chromatic scales, though when Eberhard Blum changed to a bass flute it was only to breathe one note over and over again; softly chiming chords from glockenspiel and piano, never quite in synch.

After *Why Patterns?* came an answer of sorts, in the already familiar *Time Cycle* by the German-American Lukas Foss. It runs variations on tick-tock patterns of his writing. And the London Actors Company throw the sort of resources into this revival that only Barker and Shakespeare can command. Twelve actors in a fringe play. Now, that's really dated.

"effective" enough; this composer's famously keen ear has always been quick to pick up trends, even promiscuous.

The things that challenged and rewarded musical ears had come, however, in the first third of the concert. The big flute-and-piano piece in Two Parts by Stefan Wolpe, a Schoenberg pupil who made a career as an influential, much-loved teacher in Israel and America, is a characteristic exercise: toughly musical to a high standard, if a bit monochrome. Blum's forceful intelligence, with Nils Vigeland impeccably alert at the piano, exposed the original shrews of the musical argument.

Then Blum figured alone, and brilliantly, in the other ear-opening piece, Kurt Schwitters' *Ursolate* for speaking voice. The "score" consists of nonsense-words and bare letters of the alphabet in extended patterns, for rhythmic declamation without definite pitch. A whole "sonata" - an initial Rondo developed to the bit, then a Largo in long gasps, a witty Scherzo-caricature and a classical Presto finale - is sketched in toneless black-and-white: no actual music, but far too lovingly drawn to be a mere revue-squib. Blum uses it to the hilt, with a serious provoking subtlety. Might the Classical sonata-ideal that he captured so expertly be after all just a sequence of aural thrusts, repetitions and pull-backs, and its standard "musical" dress mere window-dressing? It doesn't bear thinking about.

David Murray

INTERNATIONAL ARTS GUIDE

TODAY'S EVENTS

AMSTERDAM

Concertgebouw 20.15 Thijs Kramer conducts a programme of choral works, including the Bach Magnificat and extracts from Mozart's Coronation Mass K317. In the Kleiner Zaal, Sarah Walker accompanied by Imogen Cooper gives a Schubert Lied recital. Tomorrow at 12.30: lunch concert with Hartmut Haenchen and the Netherlands Philharmonic Orchestra. Tomorrow, Thurs and Sat at 20.15, also Sun at 14.15: Haenchen conducts Shostakovich and Beethoven, with Bella Davidovich piano soloist (6718 345).

ATHENS

Concert Hall 21.00 Camerata of the Athens Concert Hall opens a new series of chamber orchestra concerts (722 5511).

BERLIN

Schauspielhaus-Theater 20.00 Mozart's *Der Schauspieler* directed by Albrecht Kirschner, in a co-production between RIAS and the Deutsche Oper. Runs (til Nov 26), with next performances tomorrow and Sun (West Berlin 7931 515).

Philharmonie Kammermusiksaal 20.00 Hansjörg Schellenberger conducts the Haydn Ensemble Berlin in music by Michael and Joseph Haydn, with Daniela Damiano bassoon soloist. Tomorrow, Thurs, Fri, Sat James Levine conducts the Berlin Philharmonic Orchestra (West Berlin 2414 353).

BOLOGNA

Teatro Comunale 21.00 Pinchas Zukerman la conductor and violin soloist in an all-Mozart programme with the English Chamber Orchestra, Sat and Sun. Jukka-Pekka Saraste conducts the Orchestra of the Teatro Comunale in music by Wagner and Liszt (529999).

BRUSSELS

Palais des Beaux Arts 20.00 Constantin Orbelian conducts the Moscow Chamber Orchestra in music by Bach, Prokofiev and Haydn. Tomorrow: Pierre Bartholomée conducts the Liège Philharmonic Orchestra in Tchaikovsky's Fourth Symphony and Mozart's Piano Concerto No 27, with Luc Devos, Sr. Jean Fournat conducts the Belgian National Orchestra in a programme of Lalo, Poulenc and Beethoven (507 8200).

Monsieur 20.00 Das Rheingold: opening night of the third cycle of the Brussels Ring, staged by Herbert Wernicke and conducted by Sylvain Cambiaging. Tomorrow: *Die Walküre*, Fri: Siegfried, Sun: Götterdämmerung. The final cycle begins next Tues (219 6341). Théâtre National 20.30 Kleist's *Amphitryon* directed by Marc

Llabens. Runa til Sat. The next production is Böchner's *Leonce and Lena*, opening on Nov 21 (217 0035).

CHICAGO

Lyric Opera 19.30 Andrew Davis conducts Pater Hall's production of *Le Nozze di Figaro*, with a cast led by Samuel Ramey, William Shimali, Felicity Lott and Frederica von Stade, also Fri. Tomorrow and Sat: *I Puritani* (332 2244).

LONDON

Covent Garden 19.30 Sian Edwards conducts Nuria Espert's production of *Rigoletto*, with Matteo Manuguerra in the title role, Bruno Ceponi as the Duke and Judith Howarth as Gilda. Tomorrow, Fri and Sat: David Bintley's ballet *Julian* (071-828 8900). Thurs: new production of *Les Huguenots* (071-240 1066). Royal Festival Hall 20.00 The Michael Nyman Band presents the world premiere of the concert version of Nyman's soundtrack for *Prospero's Books*. Tomorrow: Oliver Knussen conducts music by Schoenberg, Stravinsky and Takemitsu (071-828 8900). Sadler's Wells 19.30 Sankai Juku: presented as part of the Japan Festival, this performance combining opera and dance provides an opportunity to witness the surreal alda to Butoh culture. Runs till Nov 2, except Sun and Mon (071-278 8916).

Royal Theatre 20.00 Rambert Dance Company opens a one-week season which will include three London premieres: Lucinda Childs' *Four Elements*, Siobhan Davies' *Signature* and Laurie Booth's

Completely Birdland. Next week: Northern Ballet Theatre production of *Romeo and Juliet* (071-494 5090).

MADRID

Tonight's concert at the Auditorio Nacional de Música is a programme of string sextets by Richard Strauss, *Die Fledermaus* and Brahms, played by the Sexteto da la AIEC de Lilla, with an alternative programme on Thurs. Tomorrow's concert by the Deutsche Camerata Naus includes Mozart's Piano Concerto No 14, with Joaquín Achúcarro director and soloist. On Fri, Sat and Sun, Aldo Ceccato conducts the Spanish National Orchestra in a programme of Stravinsky, Barnabla and Dvorak (337 0100).

NEW YORK

Avery Fisher Hall 19.30 Kurt Masur conducts the New York Philharmonic Orchestra in Dvorak's *New World Symphony* and Schnittke's *First Cello Concerto*, with Natalia Gutman. Thurs, Fri, Sat and next Tues: Claus Peter Flor conducts Mozart and Shostakovich, with Rudolf Firkušny soloist. On Fri, Sat and Sun, Camargo Hall 20.00 Kazimierz Kord conducts the Warsaw Philharmonic Orchestra in Beethoven's Egmont overture, Shostakovich's First Symphony and Prokofiev's Second Piano Concerto, with soloist Alexander Toradz. Sat: Dzwana conducts *Plaga Dama* (247 7800). Metropolitan Opera 20.00 Julius Rudel conducts *Die Zauberflöte*, with a cast including Dawn Upshaw, Ruth Walling, Jarry Hadley and Mikael Malybo, also Fri. Tomorrow: *La fanciulla dal*

West (362 6000). New York State Theater 20.00 Mark Gibson conducts Frank Corrao's production of *Madama Butterfly*, with Cynthia Lawrence in the title role. Tomorrow: *Die Soldaten*. Thurs and Sun matinee: *La bohème*. Fri: *The Mother of Three Sons*. Sat: *La traviata* (870 5570).

PARIS

Châtelet 19.00 Denia Cohen conducts the Ensemble Orchestral de Paris in Schoenberg's Second Chamber Symphony, Hindemith's *Viola Concerto* and Cohen's *Exode* pour le poème. Tomorrow: song recital by Gary Lakes. Fri: William Christia conducts Les Arts Florissants (4028 2840). Opéra Comique 19.30 Moscow Chamber Opera in Shostakovich's *The Nose*, staged by Boris Pokrovsky, repeated tomorrow. Thurs to Sun: Mozart double-bill (4286 8883).

PRAGUE

This week's programmes at the Smetana Hall includes a concert tonight at 19.30 with the Czech Radio Symphony Orchestra conducted by Štěpán Moravec. The programme consists of Mozart's Symphony No 35 and Mahler's Fifth. Tomorrow Goran Nilsson conducts the Prague Symphony Orchestra in Sibelius' First Symphony and Ravel's Piano Concerto in G, with Ramo Ramol. Justus Frantz gives a Mozart piano recital on Sat (Prasne brany 2, 232 5558). The National Theatre's repertoire includes Lucie Laumannsmoor tonight and Don Carlos on Thurs. The Smetana Theatre has *Tosca* on Fri and La

traviata on Sat. Pre-booking at city centre ticket agencies (Bohemia, Na Příkopě 16, 228738, or Malášovice, Wenceslas Square 38, 228714) and theatre box offices.

VIENNA

Staatsoper 19.30 Pinchas Steinberg conducts *Tosca*, with Mara Zampieri in the title role, Giuseppe Giacomini as Cavaradossi and Eduard Tuganjan as Scarpia. Tomorrow: *La traviata* (51444 2960). Musikverein 19.30 Yuri Bashmat directs the Moscow Soloists in music by Mozart, Schnittke and Beethoven/Mahler. Tomorrow, Thurs and Fri: Rudolf Buchbinder plays Mozart with the Vienna Symphony Orchestra (505 8190). Konzerthaus 19.30 Frans Bruggen conducts the Orchestra of the Age of Enlightenment in symphonies by Beethoven and Haydn, also Haydn's O major Cello Concerto with Anner Bylman. Tomorrow: Wynton Marsalis and Band (7124 6860).

ZURICH

Opernhaus 19.30 Heinz Holliger conducts the Fonnella production of *Die Zauberflöte*, with a cast including Matti Salminen, Josef Protschka and Anton Schäringer. Fri and Sun: Ruggiero Raimondi sings Don Giovanni. Sat: Der Rosenkavalier, with Gwyneth Jones as the Marschallin (251 0908). Tonhalle 19.30 Yehudi Menuhin conducts the Tonhalle Orchestra in Malcolm Arnold's *Tam O'Shanter* overture, Mandelsohn's *Scottish Serenade*, with Anton Fietz violin soloist. Repeated tomorrow, Thurs and Fri (201 1580).

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Some Angst in Germany

WHEN the collapse of communism propelled together the two unequal halves of Germany last year, it was clear that unification would bring opportunity and challenge in equal measure. The scale of the adventure has exceeded both the expectations and the initial problem-solving capacities of Chancellor Helmut Kohl's government. Germany still needs to find a consensus for shoring the political and economic costs of unity if the process is to be brought to a successful conclusion.

Economic and social conditions in the new Germany are a great deal more polarised than in the old Federal Republic. One illustration of the strain comes from the state of affairs in the last few weeks on temporary homes of asylum-seekers. Germany's neighbours and allies may have to accept that the domestic political environment is becoming much less settled and predictable than the one to which they had become accustomed for 40 post-war years.

The greatest force for inequality has, of course, been the legacy of communism in the east. Yesterday's report from west Germany's five leading economic research institutes shows that the post-unity picture of expansion in the west of the country and slump in the east is giving way to a more balanced state of affairs. Gross national product is due to rebound sharply in east Germany next year after a 30 per cent fall in 1990-91.

But the Bonn government should guard against premature reactions of triumph. By the second half of the 1990s, the area east of the Elbe should be one of Europe's fastest-growing regions. Nonetheless, it will probably take another two years at least for east Germany simply to make up the very sharp fall in output lost as an unavoidable result of the shock of last year's introduction of the D-Mark into the region.

Budget swollen

The flows of public sector funds into the east to allay the social costs of this economic dislocation have greatly swollen the German budget. Even for a rich country like the Federal Republic, a fiscal deteriora-

Industry puts its case

ANYONE WHO has not followed the debate about British industry may find yesterday's report from the CBI on manufacturing hard to fathom. Here we have the Confederation of British Industry sweating at the word processor, to argue that manufacturing industry matters, as if the topic were some strange branch of algebra. We are told that manufacturers employ a lot of people (10m, directly and indirectly) and are crucial to the trade balance.

Context, however, is all, because during Mrs Thatcher's reign it was held by some in high places that manufacturing did not matter; what counted were internationally tradable goods and services - the balance between goods and services being of no fundamental importance. As economic theory this may be unassailable; in practice it was a battle ground upon which the proponents of industrial interventionism and laissez-faire clashed each other senseless.

Some industrialists feared this anti-manufacturing virus had spread to the CBI. A debate at last autumn's conference led to a report which proposes the creation of a national manufacturing council within the CBI, which is a bit like setting up a society for the appreciation of the Virgin Mary inside the Vatican.

On the whole, however, the report's points are made to good effect, mixing case studies with argument. This educational role should not be underestimated, given the previously unpublished 1990 Gallup survey showing that youngsters en route for higher education rated industry a less attractive career option than either teaching or the civil service. Only shop-keeping came lower. The CBI is right to conclude that it has a responsibility to do something about industry's image.

Overall performance

When it comes to a policy framework, the starting point is that industry has done well in the 1980s in terms of industrial relations, exports and overall performance, but that with productivity levels 30 per cent below those of west Germany, 35 per cent behind Japan and 45 per cent short of

The world telecommunications industry is in a frenzy of match-making. The leading companies are trying to form relationships which could define the shape of the industry for the rest of the decade.

Many of their negotiations came to a head in Geneva earlier this month, when the industry gathered for a giant trade fair, held once every four years. When the trade fair ended, it was still uncertain who was engaged to whom. Finalising the new relationships may take months.

BT, previously British Telecom, made the first move by inviting Germany's Deutsche Telekom (DT) and Japan's Nippon Telegraph and Telephone (NTT) to join a global alliance, called Syncordia. But no sooner had BT announced the venture than other groups - France Telecom and MCI and AT&T, both of the US - tried to stop the match going ahead. BT's alliance has since been nicknamed Dis-cordia.

This enthusiasm for marriages spanning the globe marks a turning point for the \$300bn telecommunications services industry as it makes the transition from a monopolistic to a more open, competitive structure. For decades, most telecommunications carriers have been state-owned monopolies, while international communications have been run co-operatively by the carriers as an extremely profitable cartel.

In recent years, though, liberalisation has given the telecommunications companies the freedom to expand in foreign markets and in an increasing number of cases, privatisation has given them the incentive they needed. The industry is now rushing to catch up with other sectors of the world economy which are already operating on a global basis such as car making and chemicals.

The main aim is to form strategic

The main aim is to form strategic alliances to cater for the global communications needs of multinationals - replacing the patchwork of national networks with seamless global networks

alliances in order to cater for the global communications needs of multinational corporations. The idea is to replace the current patchwork of national networks with seamless global networks.

At present, multinationals wanting to link their far-flung operations with advanced communications have to install their own private networks which is costly and means they have manage the networks themselves. The new partnerships would be able to provide services such as video conferencing and short-code dialling without the multinationals having to expend so much time and money.

What is likely to emerge from the current negotiations is a series of competing alliances, structured as joint ventures. Full-blown mergers are not yet on the table because of the political sensitivity that would surround one leading national carrier buying another.

The ferment is similar to that in the telecommunications equipment industry five years ago when national champions were joining forces to create about half a dozen global organisations competing with one another. The restructuring also has parallels with the airline industry where national flag carriers such as British Airways are trying to form alliances to turn themselves into global competitors.

It is not only the structure but the character of the industry that is changing. The sector, previously populated by state monopolies, is coming

The telecommunications industry is restructuring to meet global competition. Hugo Dixon on the emerging partnerships Busy lines all around the world

The main actors are: Mr John Vallance, BT's chairman. His stated ambition is to turn BT into the world's leading telecommunications group. Though not the biggest carrier, it is the most profitable, earning more than £3bn before tax in the year to the end of March. It is also the only leading European carrier to be privatised and is correspondingly the most aggressive about pursuing foreign opportunities.

Mr Vallance has identified the market for serving the global needs of multinationals as worth \$40bn-\$50bn a year. In order to attack this, he has set up Syncordia, which is building a network to provide services in 50 countries by the end of next year. The company is based in Atlanta, Georgia, because the largest concentration of multinationals is in the US.

Mr Vallance has invited Deutsche Telekom and NTT to take minority shares of 25 per cent each in Syncordia.

Mr Helmut Rieke, DT's chief executive. His main attention is on modernising the telecommunications infrastructure of what used to be East Germany. But he has had many international suitors because DT is the largest carrier in terms of revenue in Europe and is strategically located at the gateway to eastern Europe. "We are in close discussions with our British partners, but we also are in discussions with others," he says.

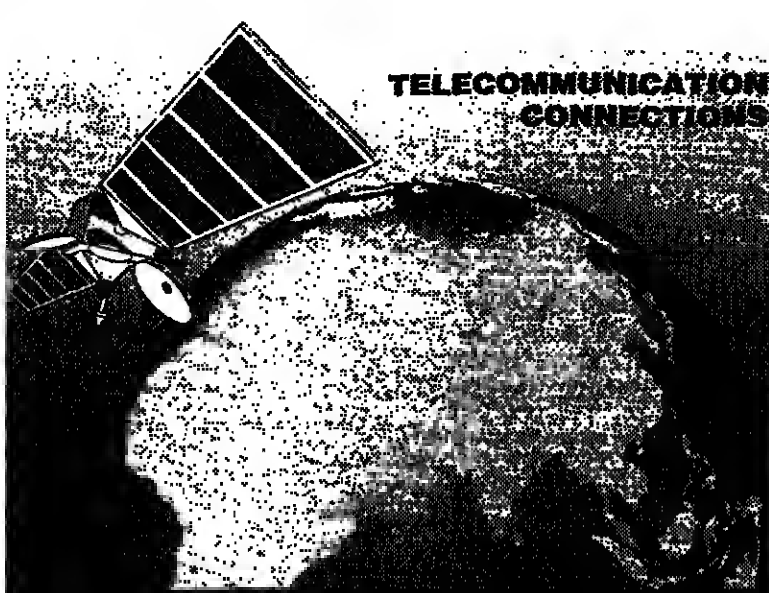
Mr Rieke is understood to be annoyed that he has only been offered junior status in BT's Syncordia. But, with other carriers knocking on his door, he would seem to be in a strong enough negotiating position to demand a larger stake.

Mr Marcel Roulet, France Telecom's chairman. When he tried to join Syncordia earlier this year, he was rebuffed by BT, which seems to want to keep as much of the venture in its own hands as possible. "We wanted to get in but not on any conditions," he said that wasn't possible, he says.

Mr Roulet is also concerned that his existing joint venture with DT to develop advanced telecommunications services could be undermined if the German company is successfully wooed by BT. His strategy seems to be to build on the existing alliance with the Germans and then to bring in one of the leading US carriers as a partner to set up a rival Syncordia.

Mr Bob Allen, chairman of AT&T which, even after its break-up in 1994 remains the most formidable force in the world telecommunications industry. He views BT's establishment of Syncordia in AT&T's backyard as an aggressive move. "BT has made no bones about being in US markets," he says.

Mr Allen's stated goal is for AT&T to generate half its revenue outside the US by the year 2000 when he retires. But he is also ambivalent over how aggressive to be, realising that, so long as foreign markets are not fully open, AT&T will need to co-operate with other local telephone companies. "We are all neophytes in the international market and we are all seeing that partnerships will be



British Telecom

Set up Syncordia in US to provide global communications to multinationals

MCI Leading shareholder of Infonet (11 partner companies including Deutsche Telekom, France Telecom, Swedish Telecom, PTT Netherlands, and KDD of Japan)

which provides data communications services

Deutsche Telekom/France Telecom Set up joint venture to develop value-added services

Swedish Telecom/PTT Netherlands Set up joint venture called Unicom to provide global communications to multinationals

Cable and Wireless About to launch Planet via the Global Digital Highway. Planet will provide business services over GDN which will provide global network of fibre optic cables

POSSIBLE LINKS

BT Talking to Deutsche Telekom and NTT of Japan about taking stakes in Syncordia

Deutsche Telekom Talking to France Telecom and AT&T of US and MCI about forming alliance to provide global communications services

France Telecom Talking to Deutsche Telekom and to MCI about global communications services

Unicom Talking to MCI and AT&T about finding a US partner for their alliance

Also talking to other Scandinavian and Benelux countries

MCI Talking to partners in Infonet about expanding into voice and image services

needed," he says.

Mr Bert Roberts, president of MCI, AT&T's most successful rival in the US. He is trying to stop BT forming a link with Deutsche Telekom and NTT. He wants to cement his own global alliance.

Mr Roberts uses two arguments in discussions with DT's Mr Rieke and others. First, that unlike BT and AT&T, MCI does not represent a threat to its partners because it is much smaller. Second, that Syncordia will fall in the important US market unless it takes on an American partner. He rates BT's chances as "zero, none, negative".

Mr Roberts plans to expand the remit of Infonet, MCI's global data communications joint venture with 11

other carriers, including the French and the Germans, so that it becomes something like Syncordia. But he is considering other schemes as well: "I have many irons in the fire," he says.

Mr Haruo Yamaguchi, NTT's chairman. Although it has the largest stock market capitalisation of any carrier, NTT remains something of a sleeping giant in international markets. NTT only runs Japan's domestic network.

There are doubts over whether NTT would be allowed by the Japanese authorities to join one of the alliances because of the traditional separation of domestic and international telecommunications in the country. But, says Mr Yamaguchi: "We are presently studying and considering Syn-

cordia... Our interpretation is not that we cannot make an investment but that we need to have discussions with our authorities."

Lord Young, chairman of Cable and Wireless. The company has positions in the main markets: it owns Mercury, the UK's second carrier; controls most of Hong Kong Telecom; has a minority stake in IDC, Japan's second-largest international operator; has shares - along with a series of partners - in a network of fibre-optic cables spanning the world's oceans, dubbed the "Global Digital Highway"; and is the fifth-largest US long-distance carrier.

C and W is about to launch Planet, its answer to Syncordia. But, for all the geographical breadth of the company's operations, Lord Young seems aware that they are thinly spread and is anxious to avoid a head-on clash with the likes of AT&T and BT.

Others. Some of the smaller carriers are concerned that, as the giants form alliances, they could become marginalised. As Mr Vlastakis Vucins, managing director of Swedish Telecom International, puts it: "If you share a stable with a horse and you are a chicken, you had better watch out."

To avoid getting squashed, Swedish Telecom last week pooled most of its international business in a joint venture, called Unicom, with PTT Netherlands, the Dutch state-owned carrier. The two are now seeking to expand the venture to include other Nordic and Benelux carriers with the aim of making themselves attractive enough collectively to sign up partners in north America and the Far East to provide business communications services.

IBM, the world's largest computer group with extensive interests in data communications, is also a possible player. Ms Ellen Hancock, the company's general manager for network services, says she has no intention of being in the "common carrier" business but that she is interested in forming alliances with telephone companies under which they would work together to provide companies with global communications services.

Despite all the negotiations among the carriers, answers to three central questions remain uncertain.

First, what will be the scope of the alliances? Syncordia aims to take over the running of multinationals' internal networks, supplying them with voice, data and video communications. It claims that it will be providing a network which is more integrated, seamless and flexible than anything currently on offer.

But it is still unclear how much Syncordia's services will differ from existing "one-stop shopping" arrangements among the carriers to cater for multinationals' needs. It is also unclear which company would end up controlling the customer if DT and NTT were finally persuaded to join. Would a German customer such as Daimler-Benz be BT's, DT's or the venture's customer?

Second, how aggressive will the carriers be? They are clearly wary of damaging the traditional co-operative arrangements which have given them such a high level of profits, put collectively at \$20bn a year, from international calls. As the chairman of one of the carriers puts it: "What BT has demonstrated is the ability to alienate the rest of the club without any practical benefits."

But the carriers also know that the international cartel is crumbling and those who move first stand the best chance of creating the relationships that will ensure success in the longer term.

Third, will the user gain? If a series of competing global alliances emerges from the negotiations, users should benefit from better, more integrated services and from lower prices. But if the alliances result in restricting competition the cartel will simply have succeeded in restructuring itself in a different guise.

Troublesome piece

It is quite appropriate that Meyerbeer's opera *Les Huguenots*, which opened the present Royal Opera House, Covent Garden in 1865, should this week have closed it, however temporarily. Thursday's new production, the first for over sixty years, has been cancelled and the house orchestra, pursuing a pay claim, has been locked out by a management pleading poverty.

A century ago *Les Huguenots* was just about the most popular opera in the repertoire. Things began to go wrong in the 1930s. It was scheduled to be performed in Berlin on the night that Hitler came to power but that production too was cancelled: Meyerbeer was Jewish.

This version, by John Dew, has suffered a succession of setbacks. He attempted to make the tale of religious persecution, relevant by transposing the setting to contemporary Germany, with two sides divided by The Wall.

German reconciliation made a nonsense of that so Dew shifted it to an equally intractable arena for the London production-Belfast, with its endless religious strife. But strife was not confined to the setting. Early in rehearsals the French soprano Francoise Polet walked out, complaining that she knew a jolly sight more about the opera than the cond actor, David Atherton. Now the orchestra has struck.

It bases its claim for more cash around the fact that Meyerbeer's original opera lasted five hours and had four intervals. Even though Dew halved the duration the orchestra wanted its breaks expanding it well into overtime land.

Granada bound

Cery Robinson, 43 tomorrow, is even younger than the actor, David Atherton. Now the orchestra has struck. It bases its claim for more cash around the fact that Meyerbeer's original opera lasted five hours and had four intervals. Even though Dew halved the duration the orchestra wanted its breaks expanding it well into overtime land.

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OBSERVER



"I find your behaviour offensive, humiliating and a day late."

franchisees is over. Shareholders in Marley, the building products group he chairs, must also be hoping that now they will be able to count on his full-time attention.

A former visiting professor at Newcastle University, Russell has sat on boards inquiring into everything from civil service pay to local authority business, in addition to holding down a series of tough jobs in the private sector. His skilful handling of the TV franchise lottery has proved beyond doubt that the 55-year-old geordie is a safe pair of hands.

But Marley is a company that needs full-time attention and recently Russell has given the appearance of being a part-time boss. The group's profits have fallen from a peak of £70m to £14m last year and will be hardpushed to top £30m next year.

Admittedly, Marley has been hit by the severe recession in the UK, but Russell's time at the helm of Marley has hardly been the most impressive

executive. The latter, probably unfairly, has carried the can for many of the TV and leisure conglomerates problems, while Robinson has a reputation which will be hard to live up to.

Robinson's big advantage is that he is a wealthy and successful businessman with no particular loyalties. And now that Granada has held on to its TV franchise and had its rights issue, it is in position to be kinder.

The downside is that Granada is a much bigger and more complicated business than Compass and Robinson's own record - namely the abortive bid for Sketchley - is not without its critics.

But the key issue, which will determine Robinson's fate, will be his relationship with Alex Bernstein, the long-standing chairman. Granada sometimes seems as if it is still run like a family business and it will be up to Robinson to prove that this is not the case, even if it means parting company with the beloved Granada TV operation.

Breath-taking

One reason the British are not enthused by Franco-German proposals for a European "Common Foreign and Security Policy" is that the phrase is such a mouthful and the initials are unmemorable. It sounds much better in German, where Gemeinsame Aussen- und Sicherheitspolitik comes out as GASP.

Back to work

George Russell, the chairman of the Independent Television Commission, is not the only person who will be glad that the brouhaha over the awards of the new ITV

episode on his cv. Marley is the fourth in a series of turnaround operations, he has tackled and his magic is taking longer than expected to work. It has not gone unnoticed that he gets £281,000 a year from Marley, and has lots of share options but no direct shareholding, whereas the ITC job only pays £37,399 a year.

Spy ring

Markus Wolf, ex-head of East Germany's vaunted HVA spy network, has received support from an unexpected quarter. Herbert Hellenbroich, former head of the BRD, West Germany's intelligence agency, claims the German justice authorities were "entirely wrong" in seeking to put Wolf on trial.

After German unification it was impossible to distinguish between good spies in the West and evil spooks in the East, he said during a weekend TV talk show with Wolf. The latter, out on bail after recently turning himself in to the German authorities, looked suitably appreciative.

For a man whose photo in the West until 1978 consisted of a fuzzy snapshot taken of him while contacting an agent in Stockholm, Wolf is now instantly recognisable from his frequent appearances in the media.

As deputy head of the hated Ministry of State Security (Stasi) under Erich Mielke (currently on bail), the 68-year-old ex-spy is far from convincing when he claims that he had not known about the Stasi's massive human rights violations. However, a few more testimonials like Hellenbroich's and all this could change.

Blackout

How many social workers does it take to change a light bulb? None. 13 of them form a working party to write a policy paper "Coping with Darkness".

Engine trouble stalls Rolls-Royce

Paul Betts on the UK company's struggle to win orders in a depressed civil aviation market



Chief executive Sir Ralph Robins with Rolls-Royce-powered 747s: 'We must keep our nerves'

A spectacular string of setbacks has sounded the alarm bells at Rolls-Royce. Plans about the company's future have grown in recent weeks following the controversial decision of British Airways to abandon its traditional US engine supplier on its new Boeing 777 airliners in favour of General Electric of the US. The BA decision came as a body blow for Rolls-Royce. The company has been struggling this year to win new commercial engine orders in a depressed civil aviation market made all the more difficult by the post-cold war slump in defence orders. It had been banking on BA to give it a much-needed lift at a time when it must win orders worth \$100m a day just to tick over, in the words of Sir Ralph Robins, its chief executive.

The company is being forced to reduce its total aerospace workforce of 34,000 by some 6,000 this year. It has already warned there are likely to be more job cuts next year as it strives to lower costs to match its two US competitors, both of which are engaged in sweeping cost-cutting programmes. Rolls-Royce's pre-tax profits have nose-dived by 90 per cent to a meagre £11m in the first half of this year from £115m for the same period a year ago. The BA decision to choose General Electric engines also appears to have had a knock-on effect on other orders. This month, All Nippon Airways, the Japanese carrier, cited BA's rejection of Rolls-Royce as one of the reasons for selecting US Pratt & Whitney rather than UK engines for its new Boeing 777 fleet.

Last week, Rolls-Royce suffered another unexpected reverse when Air India decided to switch a 220m Boeing 747 engine order placed with the UK company a year ago to Pratt & Whitney. "We must keep our nerves," says Sir Ralph. "The BA decision was a big disappointment but not a killer." He concedes that the company's short-term position is difficult but, with his characteristic self-confidence, he also believes the longer term outlook remains good. "You can't read the whole market on two or three early 777 decisions," Sir Ralph insists. In spite of its recent setbacks, he argues that the company is now in a far stronger financial position than either at the time of its bankruptcy in 1971 or during the last cyclical downturn in the commercial airline industry 10 years ago.

He remembers he had virtually no market share in the early 1960s. Why should it be more

difficult now to maintain what we have gained with our new family of engine products?" he asks. During the past 10 years, Rolls-Royce has increased its market share from about 16 per cent to 20 per cent in the commercial engine market by developing a broad product range; it has expanded into the power generation sector with its acquisition of the NEI Engineering group; it currently has a firm order book worth £7.5bn. The recent boardroom turmoil at British Aerospace has also inevitably turned the spotlight on Rolls-Royce. But in sharp contrast to BAE, the aero-engine maker is not engulfed in a top management crisis; it has not embarked on an adventurous diversification programme; nor is it seeking to raise cash through a distress rights issue. "We have no debt. We don't need a rights issue," emphasises Sir Ralph. "Our strategy is to go through this downcycle with a strong balance sheet. What we are trying to do is fairly straightforward: downsizing our military business and make our civil engine operations more efficient."

The company's challenge is whether it can maintain its momentum in the current recessionary environment. Rolls-Royce remains more vulnerable to a market downturn than its two US competitors. It is neither part of a larger diversified group nor does it have the same broad customer base as General Electric and Pratt & Whitney. It has built up a strong presence in the smaller to medium size commercial engine market, but like its two American rivals it has also targeted the development of very large engines through its 500m Trent programme as the spearhead of its future growth.

Big engines have become the chosen battle ground of the three leading aero-engine makers because large capacity aircraft are expected to account for a dominant share of the world airline market during the next 10 years. Although there are only three players competing for the £100bn market to supply engines for these new jumbos, the stakes are high for the engine manufacturers because of the huge costs and lead times of new engine programmes. As no one holds a decisive technological edge in this three-cornered contest, the battle is now being fought on muscle power in the market place and depth of pocket. On the face of it, Rolls-Royce appears to be suffering from a

financial disadvantage. To bang in at the top end of the engine market, it is having to continue to spend heavily on research and development at a time when the burden of self-funding R & D has increased as a result of the decline in government-supported military business.

Spending on the high thrust Trent engine programme is not a peak, Sir Ralph warns the company will have to take a decision soon on developing a bigger version of its RB211-535 engine to equip new, larger derivatives of the Airbus A340 long distance airliner. During the past five years, the company has spent more than £500m of its own money to develop a comprehensive range of aero-engines. If it wants to continue expanding its market share, it will have to persevere with this rate of spending.

The loss of the BA contract has also highlighted the ferocity of the battle for market share. "It all came down to money," says Sir Ralph. "We bid what we felt was the limit of prudence for our shareholders." Sir Ralph acknowledges that he expected to win the BA order but he does not want to turn it into a cause célèbre. BA,

he says, remains a big customer for Rolls-Royce and the two companies will continue to work closely together. Sir Colin Marshall, BA's chief executive, also said that at the end of the day, the deal came down to "economics". Although Rolls-Royce appears to have lost the first round in the campaign to place engines on the new Boeing 777 aircraft, it has been more successful with the Airbus A340, winning 47 per cent of the orders so far for Boeing's European rival in the twin engine widebody airliner market. Rolls-Royce has also placed its Trent on the 777s ordered by Thai International Airways, a traditional General Electric customer.

Rolls-Royce continues to see itself as a wholly independent company. But to expand its market base and spread the financial risks associated with commercial engine programmes, it is expected to speed up its search for partners and risk-sharing associates in specific projects.

The UK group has recently formed a partnership with BMW, the German car manufacturer, seeking to restore to its aircraft engine manufacturing origins. But so far the scale of its co-operative ties with other manufacturers falls short of the strategic alliances General Electric and Pratt & Whitney have forged respectively with Snecma of France and MTU of Germany.

In the long run, Rolls-Royce may have to reconsider its "go it alone" approach at the expense of its corporate pride. Many in the industry believe the market for the new heavy thrust engines is not large enough for three players on account of the development expenditures required to stay ahead of the game. Ironically, Rolls-Royce broke off five years ago a strategic partnership with General Electric. "The deal did not make enough sense to the company and its customers who wanted to buy Rolls-Royce products at the top end of the market," says Sir Ralph.

With the campaign to supply high thrust engines for the new generation of wide body aircraft only just beginning, it will take at least four or five years before the winners and losers of this multi-billion dollar battle will emerge. Will there still be room for three leading engine makers? Many believe it would be a logical step for Rolls-Royce to team up eventually with Pratt & Whitney in the big engine market to compete against the GE-Snecma combination. The answer, however, will ultimately lie with the airlines.

Joe Rogaly No regrets — yet



Ideas will be the death of us all. We know that world history is punctuated by religious conflicts. We have just seen that Marxism destroyed entire nations. Now we are threatened by the inherent contradiction between two powerful late 20th century ideas. The first, "let markets rule", currently overshadows the second, which is "growth equals destruction".

These apocalyptic ruminations were set off at a weekend conference on energy and the environment convened by the Ditchley Foundation at Ditchley Park, Oxfordshire. The 43 participants were not greenies. On the contrary they represented big international organisations, or mega-lithic electrical, nuclear and fossil fuel power brokers, or gigantic oil-mongers, or the relevant institutions and government departments of some of the most powerful industrialised countries.

Worse still, most of them were economists. In consequence the full furnace blast of a dangerous idea was stoked up with coals of impeccable logic. Nobody questioned the necessity for permanent economic growth. To a man (there was one woman) they spoke out for "letting the market do its work", whether the matter under discussion be the emission of CO₂, or the need to keep coal buried and oil in the ground, or the number of energy-profligate refrigerators in Brazil. The way to ensure that the atmosphere is not obliterated by economic take-off in China and India is to leave it to the free play of the market. The cleanest future for eastern Europe is a future with the least government intervention.

On this last point the economists are clearly right. There can also be no quarrel with the proposition that markets work better than governments. What is open to challenge is the depth of territory claimed for markets, and the thin silver left for regulation, taxation and the like. This is a consequence of the fundamental premise upon which the deliberations of important people such as these takes

place. Let me restate that premise. It is that the forecasts of global warming arising from the constant and increasing emission of greenhouse gases into the atmosphere are probably mistaken — and, more terrifying still, that even if the forecasts are right global warming is something to which humanity can adapt.

This self-destructive perception is hugely important. The world's tribe of nomadic conference-goers is small. Its influence is grossly disproportionate to its size. Within that tribe the clan of energy economists is exceptionally powerful. If its witch-doctors do not believe what the environmental talismans (themselves a numerous clan) are saying, or what the majority of the world's serious climatologists assert, then our only hope is that the theory of global warming is indeed mistaken.

The best working assumption must be that it is not. What then? The hawkers of low energy users, such as China, would be permitted to increase per capita consumption until a certain pre-set level but not to exceed it. This "Caring for the Earth" report represents a powerful idea, but its strength does not appear to match that of the drive to get richer. The pre-occupation of the Third World is with rapid growth and industrialisation. Even a concerted campaign by all global organisations — from the World Bank to the European Community — is unlikely to ensure that this is "clean" growth unless some cash is involved.

Cash transfers were not a popular topic at the weekend. There were, however, a number of suggestions for tying debt rescheduling, or Gatt concessions, to the freeing of markets. As to a tax on CO₂, there was much debate about the European Community's proposed impost of a lightweight \$3 per barrel in 1993, to be increased by a dollar a year until it reached \$10 at the turn of the century. The consensus seemed to be that it was neither desirable, nor likely to work.

It looks as if the iceberg will have to be visible before the brilliant engineers who designed the Titanic offer their regrets.

LETTERS

British Coal's efforts to cut costs and preserve markets hit by speculation

From Mr Kevan Hunt.

Sir, Recent media speculation that the government's advisers, N M Rothschild, were advocating a reduction to a pitifully small number of pits in order to make British Coal saleable to the private sector has rightly been scotched in your feature "Coal row reignites" (October 16).

As Juliet Sychara points out, the number of pits is still a matter of conjecture and depends on the price, tonnage and duration of the next coal contracts which have yet to be negotiated.

However, the potential damage this speculation causes to our business is considerable — both in terms of morale and in making it harder to sustain our people's efforts to continue the

fight to reduce unit costs and preserve our markets. You highlight the view of the managing director of a private coal company that British Coal is an institution — and that in private hands the costs at some pits could be cut by 20 per cent. This, from a quarter which may have a direct interest in a sale of British Coal, is frankly insulting. In five years, our managers and our workforce have more than doubled productivity levels. More to the point, we have every intention of continuing that improvement of performance.

Similarly, over five years we have cut real prices to the generators by 40 per cent — and current reductions in capacity are at the expense of what are unarguably far and away the

most cost-efficient deep mines in Europe. The German mining industry — no slouch when it comes to efficiency, quality and performance — has production costs 70 per cent higher than British Coal's. We are proud of our achievements as a nationalised industry and we are not afraid of the prospect or challenge of privatisation. Given the opportunity, I have no doubt that the people in this industry will put their money where their mouth is. They will welcome the opportunity to have a stake in the business.

Kevan Hunt, employee relations director, British Coal, Hobart House, Grosvenor Place, London SW1X 7AE

An irrational investment fashion

From Mr William Wallace.

Sir, Robert Peston's comment on the flotation of 31 ("Risky business may start to play safe", October 14), that its "investment horizons may be shortened when its shareholders sell" to life insurance companies and pension funds, touches on one of the most irrational aspects of financial market behaviour in Britain. Why — apart from convention and fashion — should life insurance companies and pension funds take such a short-term view of the companies in which they invest?

Like most of your readers, much of my personal savings is locked up in long-term insurance policies and pension provision. I am interested in the yield of these savings over a 25- to 50-year period, not in the month-by-month performance of their shares, or the short-term profit to be made from takeover bid premiums.

I was shocked to hear the chairman of one of the insurance companies in which I have a policy stating some months ago that he saw no reason for his company to have any long-term commitment to the firms in which it held stakes. Rather, it bought and sold in the market as opportunity offered. This indicates that long-term funds are being used to follow short-term trends, rather than the company playing a part in promoting the long-term growth of the firms in which the insurance community and the pension funds are now such substantial stakeholders.

Mr Peston expresses "anxiety" about the financial institutions' demands for immediate returns rather than long-term growth in their approach to the companies in which they invest. I would add bafflement to anxiety, that these guardians of our savings should prefer to play the markets and demand high dividends than focus on asset growth.

William Wallace, 49 St James's Drive, Wandsworth Common, London SW17 7RN

Power of veto endangers EC arms export control

From Mr Paul Davis.

Sir, David Buchan rightly highlights (FA loan march towards Euroarmy, October 18) two examples where attempts by European Community member-states to co-ordinate their foreign policies have been restrained by the common consent of the twelve. A third example, and one which will have grave security consequences, is in the field of arms export control policy.

As trade barriers are removed after 1992, military and "dual-use" technologies will, for the first time, be able to move relatively freely within the Community. This

will present arms manufacturers with the opportunity to divert arms exports through the country with weakest export controls. Bearing in mind that five of the eight leading arms exporting countries are EC members, and that these same countries are among the big exporters of nuclear, chemical and high-technologies, there is an urgent need for the EC to develop a common policy on arms export control.

However, as long as each member-state retains the right of veto on such issues, Community arms export control policy will be effectively determined by the country with weakest

legislation. Acceptance of qualified majority voting on such issues is, therefore, highly desirable. As Mr Buchan points out, the British government is at odds with its European partners in its opposition to extend majority voting to agreed areas of security policy. It is ironic that a government publicly committed to strengthening control over arms exports at the United Nations is blocking the development of tighter controls at the EC.

Paul Davis, research director, Saferworld Foundation, 22 Colston Street, Bristol BS1 5BB.

Waterfront reform in Australia yet to pass the test

From Mr Nicholas Finney.

Sir, In August, I visited Australia on a study tour to examine its Waterfront Reform programme and met the principal players from all sides of industry, unions and government. Kevin Brown's article, "Australian dock reforms put back on track" (October 10), is misleading in suggesting that the Australian Waterfront Reform programme is on the verge of success.

Whatever the manpower reductions, the basic control of the Waterfront Workers' Federation (equivalent to the UK's TGWU) over all operations

remains intact. Consequently, restrictive practices remain and so do "jobs for life". Also, the cost to the taxpayer of encouraging 3,000 "wharves" to leave is substantial — £150m, about 30 per cent more per man than the equivalent cost of reform in the UK. Australia's international performance comparisons are themselves inaccurate. Tilbury's crane handling figure is understated by about 60 per cent. No one in Australia, even the stevedoring companies, seriously expects them consistently to achieve the figures which Mr Brown quoted —

which are themselves below the international average. The real test of Waterfront Reform is whether prices to the shipper, and ultimately the consumer, fall through a combination of increased competition, removal of restrictive practices and improved efficiency. Ask any shipper in Australia for his opinion of these success criteria and he will give you the "thumbs down" to the Waterfront Reform process in Australia.

Nicholas Finney, The Waterfront Partnership, 36 Grosvenor Gardens, London SW1W 0EB

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INTERNATIONAL COMPANIES AND FINANCE

Chase Manhattan makes progress

By Alan Friedman in New York

CHASE Manhattan, the New York bank that has been hard hit by the real-estate slump, yesterday released improved third-quarter results which suggest the bank's policy of slashing costs and restructuring is beginning to pay off.

The bank reported third-quarter net income of \$136m, compared with a loss of \$623m in the same quarter of 1990. Earnings per share were 79 cents, against a loss of \$5.03 a year ago.

For the first nine months of 1991 Chase achieved \$385m of consolidated net profits, com-

pared with a loss of \$527m in the same period of last year. Although Chase forecast the improvement earlier this month, Wall Street was nonetheless pleased and marked the bank's share price 3% higher to \$18 1/2 in trading yesterday morning.

The Chase results reflect increases in net interest revenues, fee-based income and reductions in bad debt provisions and operating expenses.

Mr Tom Labrecque, chairman, said the bank was encouraged by its progress, which included the acquisition

of two banks in Connecticut and an improved common equity-to-assets capital ratio of 4.26 per cent, against 3.56 per cent a year ago. The bank, he said, also exceeded its target of reducing the workforce by 5,000 employees.

The provision for possible credit losses for the third quarter was \$265m, the same as in the second quarter and significantly lower than the \$650m set aside a year ago.

Chase said that if the US economy remained weak in the coming months it could cause the bank to make further sub-

stantial loan-loss provisions during the rest of 1991. The provision for bad debts in the first nine months of 1991 was \$770m, compared with \$1.1bn in the same period of 1990.

Chase is facing several challenges, not least of which will be the retail banking assault expected when Chemical Bank and Manufacturers Hanover Trust complete their planned merger. The Chase results, however, compare favourably with the \$685m loss recorded in the third quarter by Citicorp, the leading US bank.

Cummins optimistic as cost-cutting takes effect

By Karen Zagor in New York

EFFORTS to cut costs appear to be paying off for Cummins Engines, one of the world's leading diesel engine makers, which has significantly narrowed its third-quarter loss and expects to break even in the fourth quarter.

Analysts had expected worse results from Cummins. Shares in the company climbed 1% to \$41 1/2 at mid-session in a declining market.

For the three months ended September 30, the Columbus, Indiana-based company suffered a net loss of \$11.6m, or 94 cents a share, against a deficit of \$33.7m, or \$2.55, in the year-earlier period.

Cummins' loss before taxes, minority interest and extraordinary items was \$8.4m in the 1991 quarter, compared with \$49.1m a year earlier.

The company's sales were bolstered by strong demand for its mid-range B and C Series engines. Net sales improved to \$860.9m in the quarter from \$829.6m a year earlier.

The company said that third-quarter results were historically the weakest of the year because of plant shutdowns and seasonal declines in engine parts and sales.

Although Cummins expects to break even in the fourth quarter, it has seen no signs of economic improvement in its key markets and said that conditions remain uncertain.

For the first nine months, the group recorded a net loss of \$11.6m, or \$1.30 a share, compared with a net loss of \$18.7m, or \$2.64, in the 1990 period. Excluding one-time items, taxes and minority interest, Cummins' net loss grew to \$48.4m in the first three quarters, from \$22.5m a year ago. Sales eased to \$2.54bn from \$2.56bn.

In May, Cummins slashed its third-quarter dividend 5 cents a share, from 55 cents, in an effort to reduce its cash requirements.

Zenith improves in third quarter

By Barbara Durr in Chicago

ZENITH Electronics, the US consumer electronics group, continued to accumulate losses in its third quarter with net deficit of \$1.5m, or 5 cents a share. This, however, was an improvement over last year when net losses were \$11.8m, or 44 cents a share.

A cost-cutting programme, which sliced \$10m off costs, helped the latest quarter's results. However, Zenith's chairman, Mr Jerry Pearlman, warned that "the lingering difficult economic and industry environment" meant the company would have to continue to intensify its cost cutting.

For the first nine months, Zenith's losses were \$52.1m, or \$1.82 a share, almost double last year's loss of \$26.8m, or \$1.01.

Sales have been hit hard by the US recession. Third-quarter returns were \$344m, up slightly from \$342m for the same period last year.

Although Zenith was able to sell more colour televisions and video-cassette recorders this quarter compared with the third quarter of 1990, its margins were under pressure from the cumulative price reductions made by the industry in recent years.

Zenith invested \$5m during the third quarter in its high definition systems (HDTV), on which it has pinned its hopes to turn the company around.

The US Federal Communications Commission has begun testing HDTV during the past quarter, and the Zenith-AT&T all-digital HDTV system is scheduled to go to tests in the first quarter of 1992.

Net earnings fell to US\$4.5m, or 3 cents a share, from US\$97m, or 92 cents a share, a year earlier. Sales dropped to \$648.5m from \$768.6m.

The latest figure includes a \$18.8m charge to cover the costs of an early-retirement

Unisys narrows loss to \$75.8m

By Louise Kehoe in San Francisco

UNISYS, the financially troubled US computer maker, reduced losses for its third quarter as it continued to consolidate operations to reduce costs and reduce its heavy debt load.

In the third quarter Unisys reported a net loss of \$75.8m, or 66 cents a share. In the same period last year the company suffered a net loss of \$37m, or \$2.42, including a charge of \$181m for job cuts and consolidation of operations.

Revenue for the quarter was down sharply to \$1.97bn, compared with \$2.40bn in the year-earlier quarter.

Third-quarter results for 1991 do not include proceeds from the sale of Timesplex which was sold for \$207m.

"We are encouraged that, in

spite of lower revenue, profit from operations in the third quarter improved and expenses are trending downward," said Mr James Unruh, chairman and chief executive.

Asset sales of more than \$250m were completed in the quarter, raising total cash generated by sales to more than \$55m in 1991.

Unisys reduced its debt by nearly \$400m during the third quarter, Mr Unruh said. The company's debt, net of cash, was now below \$3bn for the first time over three years, he said.

For the first nine months of 1991, Unisys' net loss was \$1.47bn, including a special charge of \$1.2bn recorded in the second quarter, or revenue of \$6.22bn. In the same period a

year ago, the net loss was \$48.3m, including a special charge of \$181m, on revenue of \$7.18bn.

Mr Unruh said that the proposed sale of the company's defence operations through an initial public offering announced last month would "concentrate all resources and management time on Unisys' commercial information systems operation".

He said the company's efforts to lower cost structures to a level below that needed to support conservative revenues projections for 1991 and 1992 were "on schedule".

Worldwide employment in the quarter dropped by more than 6,000, including 2,300 jobs as a result of the sale of Timesplex.

Inco tumbles as nickel prices drop

By Bernard Simon in Toronto

INCO, the western world's leading nickel producer, has blamed sagging prices and lower productivity at its Canadian operations for a 95 per cent slump in third-quarter earnings and a continuing cash shortfall.

Net earnings fell to US\$4.5m, or 3 cents a share, from US\$97m, or 92 cents a share, a year earlier. Sales dropped to \$648.5m from \$768.6m.

The latest figure includes a \$18.8m charge to cover the costs of an early-retirement

programme announced recently as part of restructuring of its operations in Sudbury, Ontario.

Operating income from primary metals dropped to \$43m from \$189m. Inco realised an average nickel price of \$3.90 per lb in the third quarter, down from \$3.97 in the previous three months and \$4.46 a year earlier.

Nickel shipments fell to 113m lbs from 116m lbs. Deliveries for the first nine months totalled 882m lbs, up from 864m

lbs, but the cuts at Sudbury will reduce Canadian production by 10m lbs over the balance of the year.

Partly because of production cuts, finished nickel inventories dropped to 60m lbs at the end of September, from 65m lbs at the end of June.

Inco ascribed higher, though unspecified, unit production costs to rising wages and benefits, increased depreciation, and the depletion last year of the low-cost Thompson North mine in Manitoba.

Repola blames FM874m deficit on slack demand

By Enrique Tessieri in Helsinki

REPOLA, Finland's largest listed group, fell deeply into the red during the first eight months of the year. The company reported a loss of FM874m (\$210m) before taxes and minority interest, against a profit of FM715m in the corresponding period in 1990.

The company blamed the loss on lower international demand for forest products and machines, as well as on problems in the national shipbuilding industry.

A FM135m loss by Metsä-Botnia, a pulp group in which Repola has a large minority holding stake, and an increase in net interest expenses to FM1.08m from FM62m undermined the group's profitability.

Group investments during the January-August period fell sharply to FM1.36bn, from

FM3.61bn in the year-earlier period.

Consolidated sales also slipped to FM13.92bn from FM15.18bn. Operating profit fell to FM455m from FM1.24bn. The loss per share was FM6.72.

Mr Tauno Matomäki, president, said he did not expect market conditions for Repola's products to improve during the remainder of this year.

Repola's three industrial groups reported a setback in profitability. United Paper Mills (UPM), Repola's biggest division and Finland's largest forest group, said that its operating profit had fallen to FM482m from FM987m.

Rauma, the group's metals engineering division, and Rosenlew, the plastic packaging arm, reported operating losses.

Southwest Airlines slips to \$15.7m

By Nikki Tait in New York

SOUTHWEST Airlines, the Dallas-based regional carrier which is generally regarded as one of the most promising US airlines, yesterday reported third-quarter profits of \$15.7m, down by almost one-third on the \$23m earned in the same period a year earlier.

Operating profits slipped from \$36.7m to \$31.1m, while non-operating gains of \$2.68m turned into a small loss of \$45,000. Net interest charges were also higher at \$9.26m, compared with \$6.35m. Revenues were up from \$16.6m to \$35.3m.

Southwest's figures follow the release last week of some stronger-than-expected results from American Airlines.

Southwest noted that "aggressive promotions" had been used to stimulate an otherwise weak domestic travel market, resulting in improved traffic. It said it was also relatively optimistic about the fourth-quarter prospects.

"Bookings for the fourth quarter look very good compared with the same period of 1990," the airline said, adding that Southwest conceded that, with a "tentative" economy, it was continuing aggressive promotions.

This was expected to push down comparable revenue yields, but Southwest saw the prospect of a favourable load factor and available seat-mile yield comparisons.

Tampella deeper in the red

TAMPELLA, the troubled Finnish forest and metals engineering group, yesterday reported an increased pre-tax loss of FM488m (\$210m) in the first eight months of the year, against a deficit of FM225m in the same period last year, writes Enrique Tessieri.

The group also saw a sharp rise in the loss after financial items, from FM327m to FM807m. Consolidated sales rose to FM4.19bn from FM4.19bn.

The group was placed under

the control of the Bank of Finland earlier this month after Skopbank, Finland's fourth largest bank and a major shareholder in Tampella, was rescued by the Bank of Finland.

Valmet, the Finnish state-owned paper machinery and metals engineering group, said losses before tax and allocations had increased to FM560m in the first eight months, from a loss of FM275m last time.

Consolidated sales fell to FM4.11bn from FM5.57bn.

NORTHERN IRELAND

The FT proposes to publish this survey on
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Data source: Chief Executives in Europe 1990

FT SURVEYS

DENMARK

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DK-1161 Copenhagen
K, Denmark.

*Data source: Chief Executives in Europe 1990

FT SURVEYS

Prices for electricity delivered to the purchaser of the electricity (excluding tax and delivery charges) in England and Wales.

Prevalence Rates by Period		Plant Values by Period	
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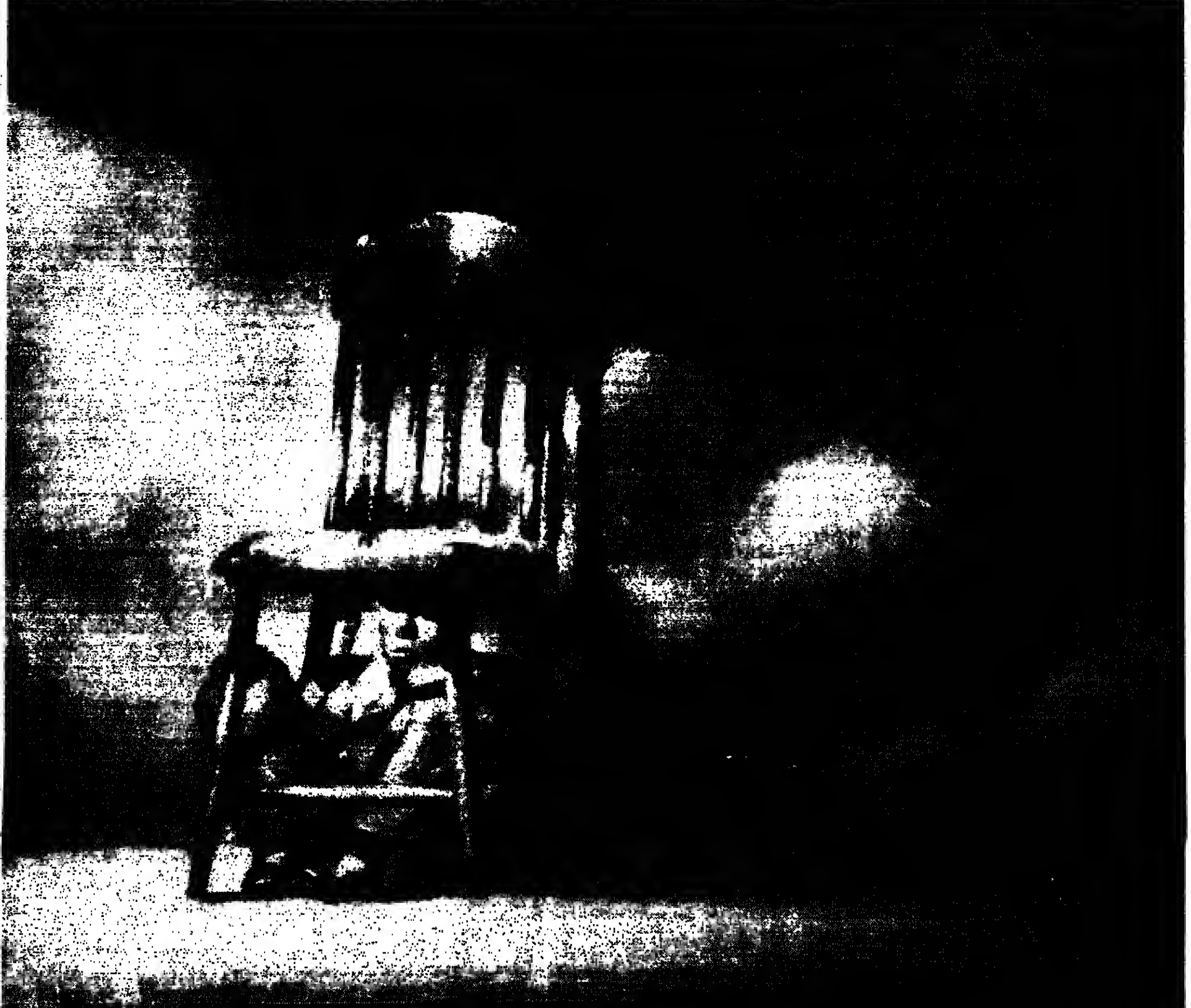
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New York

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Table with multiple columns and rows of financial data, including company names and numerical values.

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you hide from its rewards.

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BARCLAYS INVESTMENT FUNDS (LUXEMBOURG)
Société d'Investissement à Capital Variable
("the Company")
Registered Office:
Centre Mercure
7th Floor,
41, avenue de la Gare
L-1611 LUXEMBOURG
R.C. Luxembourg B 31439

NOTICE OF ANNUAL GENERAL MEETING
The Annual General Meeting of Shareholders is to be held at the registered office of the Company on Friday November 15th, 1991 at 11.30am (or as soon thereafter as it may be held) and for the following purposes:

- 1) To receive and adopt the Directors' Report of the Auditor for the period to 31st July 1991.
- 2) To receive and adopt the Statement of Net Assets and the Statement of Operations for the period to 31st July 1991.
- 3) To grant a discharge to the Directors in respect of their duties for the period ended 31st July 1991.
- 4) To grant a discharge to the Auditors in respect of their duties for the period ended 31st July 1991.
- 5) To re-elect Messrs Dennis, Lane, Pauly and Wilmut as Directors of the Company.
- 6) To re-appoint Messrs Price Waterhouse as Auditors.
- 7) Miscellaneous.

Voting
Shareholders are advised that in accordance with the Articles of Incorporation the Annual General Meeting of Shareholders will require a quorum of 10% of the shares outstanding.

Voting Arrangements
In order to vote at the meeting the holders of bearer shares must deposit their shares not later than 12th November 1991, either at the registered office of the Company, or with any bank or financial institution acceptable to the Company and the relative Deposit Receipts (which may be obtained from the registered office of the Company) must be forwarded to the registered office of the Company to arrive not later than 12th November 1991. The shares so deposited will remain blocked until the day following the Meeting or any adjournment thereof.

The holders of registered shares need not deposit their certificates but can be present in person or represented by a duly appointed proxy.

Shareholders who cannot attend the meeting in person are invited to send a duly completed and signed proxy form to the registered office to arrive not later than 12th November 1991.

Proxy forms will be sent to registered Shareholders with a copy of this Notice and can be obtained from the registered office.

The Board of Directors

GROUPE MOULINEX

Turnover as at
30th September, 1991

The Group's sales, which include Krups since January 1991, totalled 5,500 million French francs as at 30th September, 1991.

On a comparable basis (excluding Krups) turnover rose by over 15%. This increase is attributable mainly to business activity outside France. Sales in France, which account for 20% of the Group's turnover, rose by 4.8%.

The Group expects to attain its year-end sales objectives in spite of the fact that the international economy appears to be less active than expected.

Turnover (in millions of French francs)	Including Krups 1991	excluding Krups 1991	1990	%
Consolidated turnover	5,507	4,389	3,787	+15.9
Moulinex S.A. turnover	—	3,546	2,783	+27.4

INTERNATIONAL COMPANIES AND FINANCE

Telecoms trio expected to drop Australian bid

By Kevin Brown in Sydney

FRANCE TELECOM and Ameritech and Bell Atlantic of the US are expected to withdraw shortly from Kalori Communications, one of two consortia bidding for Australia's second telecommunications licence.

Hutchison Whampoa of Hong Kong, the remaining member of the consortium, is expected to proceed with the bid, but the withdrawal of its French and US partners increases the likelihood that the second licence will be awarded to the rival Optus Communications consortium.

Optus is owned by BellSouth of the US and Cable & Wireless of the UK, each holding 24.5 per cent, and Mayne Nickless, an Australian transport group, with 30 per cent. Australian institutions hold the balance.

The second licence will be awarded to the winning bidder for Ausnet, the government's long-making satellite company. The privatised Ausnet will compete with a government-owned carrier formed by a merger of Telecom Australia, the main domestic carrier, and OTC, which handles international traffic.

Earlier this year, the government announced the duopoly would last until 1997, giving the second carrier five years to establish itself before Australia moves to open competition in telecommunications.

Optus has emerged as



Kim Beazley may have to resolve dispute

favourite to win the licence after promising to spend A\$4bn (US\$3.2bn) over five years to provide competitive STD and ISD access to all Australians, and a digital cellular service to 80 per cent of the population. It says it will achieve a 21 per cent share of the domestic and long distance market for residential and small business customers by 1997, and more than 30 per cent of the cellular market.

Withdrawal of three of Kalori's four partners is embarrassing for the federal Labor government, which needs to demonstrate to opponents of privatisation that it can achieve a high price for Ausnet. It follows tortuous negotia-

tions between Telecom Australia and both consortia over the interconnect fee - the price to be paid by the second carrier for access to Telecom's trunk lines.

The level of the interconnect fee is crucial to the second carrier's prospects of viability and to Telecom/OTC's ability to defend its market share against competitors.

Compromise recommendations by Ausnet, the industry's supervisory body, were rejected by both consortia, but neither has been unable to reach agreement with Telecom, raising the prospect that Mr Kim Beazley, the communications minister, may have to resolve the dispute.

Kalori's US partners are thought to have concluded there was little prospect of profitable investment in Australia, partly because of the government's plans to move quickly to open competition.

Both companies are part owners of Telecom New Zealand, which was privatised earlier this year, but are understood to have identified few possibilities for synergy between the two countries.

Hutchison said it would table a bid for Ausnet by November 8 and indicated it would announce a strategic bid with an overseas manufacturer of telecommunications equipment.

Kao warns of slower domestic growth

By Robert Thomson in Tokyo

KAO, the Japanese household products and cosmetics maker, unveiled a 4.5 per cent increase in pre-tax profits to ¥19.9bn (\$153.3m) for the first half to end September.

It indicated, however, that the "clear signs" of slower domestic economic growth were likely to result in a modest increase in sales for the remainder of the year.

Sales for the first half rose 3.6 per cent to ¥288.5bn, but Japanese companies have generally become more pessimistic about second-half sales, having previously expected a sluggish economy to regain momentum.

Department store sales remain weak, although the downturn is not expected to be deep enough to affect severely the sales of daily use goods.

Kao's sales of personal care products and cosmetics rose 3.7 per cent, after the introduction of two new shampoo lines, while sales of household laundry and other cleaning products increased by 3.3 per cent, and those of hygiene and other products were 2.7 per cent higher.

Chemical product sales rose 5.3 per cent, in spite of the softness in important customer areas, such as the auto industry, construction, and paper and pulp. Sales of fatty chemicals rose 9.7 per cent, and sales of specialty chemicals and floppy disks were 3.4 per cent higher.

For the full year, the company predicts sales of ¥585bn, up from ¥570bn last year, and a pre-tax profit of ¥42bn, up from ¥40bn.

Fujisankei puts \$50m into new US film maker

Fujisankei Communications Group, a Tokyo media and entertainment company, said it has invested \$50m to form a US film production company, Reuters reports.

Although Japanese investment in Hollywood has become fairly commonplace, Fujisankei is the first Japanese company to form its own production company in the US.

Other Japanese investment has been in existing Hollywood studios. Fujisankei California Entertainment intends to produce one to two films a year.

Interest helps Engen rise 34% to R286m in difficult trading

By Philip Gawith in Johannesburg

ENGEN, the integrated energy company in South Africa, overcame a difficult operating environment to record a 34 per cent increase in attributable earnings in the year to 31 August. The company was helped by interest income on the proceeds of a R1.1bn (\$365.5m) rights issue.

The benefits of the issue saw the group record finance income of R42m, compared with a finance charge of R29m last year. This contributed to a 34.3 per cent rise in attributable income, to R286m.

Earnings per share were diluted by the rights issue, rising 30 per cent to 288 cents. The dividend was also lifted by 20 per cent to 118 cents per share.

Turnover advanced by 20 per cent to R6.1bn, but margins were trimmed with the result that operating income was only 17.3 per cent up at R279m. Mr Rob Angel, managing director, said there had been no volume growth for their products in the past year and cost inflation rose faster than selling prices.

This offset the benefits of a rationalisation programme and of integrating the Trek product

distribution into the Mobil network. A feature of Engen's performance had been the exceptional increase in the group's exports, albeit off a low base, to contribute about 5 per cent of profits.

Mr Angel said Engen was trading with nine African countries and all the Indian Ocean islands, volumes having increased by about 250 per cent during the past nine months.

Significant progress has also been made with exploration and production. Engen is involved with two oil companies drilling in Gabon and Mr Angel said there was hardly a country on the west coast of Africa to whom they were not talking.

He said that Engen's acceptance as a regional participant had been a highlight of the past year, with several large companies looking to do business with them. Phase 1 of the group's refinery expansion plan, to increase capacity by 30 per cent, is on target for completion by July 1992. While it will not help profits in the next 12 months, which Mr Angel says will be tough, he is predicting real earnings growth.

Four mines in Rand Group lift profits 33%

By Philip Gawith

FOUR gold mines in the Rand Mines group lifted after-tax profits by 33 per cent to nearly R27m (\$8.9m) in the September quarter after benefiting from cost controls and better productivity.

Total gold production for the quarter rose 11 per cent to 11,515kg and average underground costs declined to R31.572 per kg gold mined from R32,000. The average gold price received was virtually unchanged at R381.11 per kg.

Profit sharing and productivity schemes were successfully implemented at the Harmony, ERPM and Durban Deep mines. The mines paid a total of R3.6m in the quarter in terms of the schemes which Mr John Turner, chairman of the gold division, described as "playing a key role in the performance of the mines concerned".

Last week the JCI group announced it had paid R5.2m in productivity bonuses during the quarter. The best performance came from Harmony, the group's largest mine, which lifted underground gold production by 19 per cent to 5,634kg. After-tax profit rose 52.5 per cent to R19.9m.

ERPM improved its operating performance to record a working profit of R5.4m, but a heavy interest payment of R13.3m left the mine with a loss of R5.7m for the quarter, against a R7.2m loss last year.

The mine's total borrowings and deferred interest of R25m at end-September.

Durban Deep lifted profits to R6.1m from R3.9m while Blyvooruitzicht was the only mine in the group to record lower profits, down by R3m to R7.6m because of an increased tax bill.

The Barbrook mine remains on care and maintenance and is not due to re-open in the foreseeable future.

Fletcher to sell assets

FLETCHER CHALLENGE, New Zealand's largest industrial company, plans to continue selling of marginal assets in the year to June 1992, Reuters reports.

Mr Hugh Fletcher, Fletcher Challenge chief executive, said the company planned to sell about NZ\$750m (US\$424.8m) of assets in 1991-92, compared with NZ\$1bn the previous year.

"It's all about trying to improve the quality of our portfolio and concentrate on the products that we believe we can be an internationally excellent operator," Mr Fletcher said in a television

interview. While Fletcher Challenge sold its ammonia and urea business in Taranaki, New Zealand, for NZ\$45.5m earlier this month, it would concentrate on its methanol business.

Mr Fletcher said the company hoped to double its level of Australian shareholders, but this would not be through new equity issues.

About 10 per cent of the company's shareholders are Australian.

"We will achieve our balance sheet objectives without issuing any more ordinary equity," he said.

TOTAL

Listing on the New York Stock Exchange and Global Share Offering

Issue Price FF 903 per Share

This offering is made in connection with the application made by TOTAL to list its B shares represented by American Depositary Shares on the New York Stock Exchange with a view to widening its shareholder base and achieving greater liquidity in the market for its shares.

The 2,900,000 share global offering currently launched by TOTAL consists of:

- a public offering of 1,500,000 shares represented by ADSs in the United States, underwritten by a syndicate of banks led by LEHMAN BROTHERS;
- a concurrent public offering of 800,000 shares in France underwritten by a syndicate of banks led by BANQUE PARIBAS;
- a concurrent offering of 600,000 shares outside France and the United States underwritten by a syndicate of banks led by CREDIT SUISSE FIRST BOSTON Limited.

An over-allotment option of 200,000 new shares has also been granted to the United States underwriters, which, if exercised in full, will bring the total size of the global offering to a maximum of 3.1 million shares, representing a dilution of 6.4% of TOTAL's fully diluted capital.

In order to permit a simultaneous placement of the three tranches, there is no preemptive rights and no priority subscription period for existing shareholders. Proceeds raised from the global offering will be used by TOTAL for general corporate purposes.

LEHMAN BROTHERS INTERNATIONAL and PARIBAS CAPITAL MARKETS GROUP are joint global coordinators of the global share offering.

ISSUE PRICE

The issue Price of FF 903 was determined by TOTAL's Board of Directors on October 21, 1991 in compliance with French law, which requires that the issue Price be not less than the average of the opening trading prices of the currently outstanding shares on the Paris Bourse for a period of 20 consecutive business days during the 40 business day period immediately preceding the date of commencement of the offering. Holders of the shares offered will be entitled to receive payment in full of any dividends declared in respect of 1991 and subsequent years.

TIMING OF THE OFFERING

A subscription period for the French and the International offerings commenced on October 22 and will end on October 24, 1991. The offering in the United States will commence on October 24.

LISTING AND TRADING

Applications have been made to list the shares offered in the global share offering on the Paris Bourse and to have such shares listed on the London Stock Exchange and authorized for quotation on SEAQ International. The ADSs offered in the United States have been approved for listing on the New York Stock Exchange.

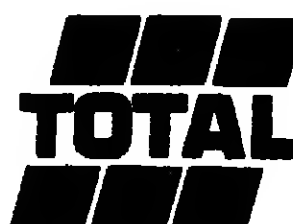
It is expected that trading in the new shares on the Paris Bourse, quotation of such shares on SEAQ International, and trading of the ADSs on the New York Stock Exchange will commence simultaneously on October 25, 1991 at 2:30 p.m. Paris time (equivalent to 2:30 p.m. London time and 9:30 a.m. New York time).

Until the closing of the offering, which is expected to occur on October 31, 1991, such trading shall be by way of "promesses d'actions" (the equivalent of "when-issued" trading) on the Paris Bourse and such quotation shall be on a "when-issued" basis on SEAQ International.

This advertisement is issued by TOTAL and its content has been approved for the purposes of section 57 of the Financial Services Act 1986 by Lehman Brothers International and Paribas Capital Markets Group, joint global coordinators of the contemplated offering as well as Credit Suisse First Boston Limited, lead-manager of the International Tranche, who are respectively members of The Securities and Futures Authority Limited.

This advertisement does not form part of any offer of securities. Any application for shares should be made on the basis of information contained in the prospectus alone. Before deciding to apply for shares, you should consider whether the shares are a suitable investment for you. The value of shares can go down as well as up. If you need advice you should consult an appropriate professional advisor.

This advertisement represents a summary only of the details of the offering outlined in the prospectus.



Residential Property Securities No.1 PLC

£200,000,000

Mortgage Backed Floating Rate Notes 2018

Notice of Partial Redemption

S.G. Warburg & Co. Ltd. announce that Notes for the nominal amount of £2,400,000 have been drawn for redemption on 22nd November, 1991, in accordance with Clause 5(b) of the Terms and Conditions of the Notes.

The distinctive numbers of the Notes drawn, are as follows:-

26 82 140 196 253 310 367 423 480 537
593 651 877 934 991 1048 1105 1162 1218 1275
1800 1856 1913 1969

On 22nd November, 1991 there will become due and payable upon presentation of each Note drawn for redemption, the principal amount thereof, together with accrued interest to said date, at the office of:-

S.G. Warburg & Co. Ltd.

2 Finsbury Avenue, London EC2M 2PA

or one of the other paying agents named on the Notes.

Interest will cease to accrue on the Notes called for redemption on and after 22nd November, 1991 and Notes so presented for payment should have attached all Coupons maturing after that date.

£133,300,000 nominal amount of Notes will remain outstanding after 22nd November, 1991.

22nd October, 1991

US\$100,000,000

MARINE MIDLAND BANKS, INC.
FLOATING RATE SUBORDINATED CAPITAL NOTES

due 1999



For the three months 22nd October 1991 to 22nd January 1992, the Note will carry an interest rate of 5% per cent per annum with a Coupon amount of US\$146.94 per US\$10,000. Interest payment date 22nd January 1992.

HONGKONG BANK LTD LONDON LIMITED
INTEREST DETERMINATION AGENT

INTERNATIONAL COMPANIES AND FINANCE

Swiss Bank lifts profit by 40% in sluggish economy

By William Ouliforce in Geneva

SWISS BANK Corporation, Switzerland's second largest bank, said yesterday it had lifted its profit for the first nine months of 1990 by nearly 40 per cent, before provisions and provisions, but it gave no figures.

At the half-way stage SBC disclosed a 25 per cent increase to SF1,658m in the comparable earnings figure.

Group and parent bank cash flows for the full year should be well ahead of last year's results, SBC said. But it was already clear that provisioning needs would also be significantly higher than in 1990. With the economy continuing to be sluggish, loan positions and a rise in increased risk had expanded.

Last year group cash flow

fell by 15 per cent to SF1,658m while the parent bank's cash flow at SF1,438m was down by 0.9 per cent. The first nine months of 1990 were, however, badly affected by the outbreak of the Gulf crisis.

Net interest earnings for the first nine months this year had been 9.5 per cent higher thanks to improved margins, especially outside Switzerland, and lucrative money market operations, SBC reported.

On a cumulative basis commission income had grown by 6.7 per cent compared with the first three quarters of 1990. Improved revenues from portfolio management and from credit and fiduciary business had outweighed the drop in brokerage receipts by a wide margin.

Foreign exchange earnings had also shown a particularly encouraging advance.

Total assets expanded by 1.7 per cent to SF172.5bn during the first nine months, although the depreciation of the dollar since the end of June had resulted in third-quarter growth of only 0.5 per cent.

On aggregate, SBC's customer deposits declined by 3.9 per cent during the third quarter. Interbank time deposits, which had been relatively low at the end of June, were up 12.8 per cent; non-bank time deposits fell by 6.1 per cent. With short-term interest rates staying high, there was a net outflow of 0.1 per cent from savings and deposit accounts.

Volkbank results, Page 28

NCC gives warning after drop of 44%

NCC, the Swedish property and construction group, yesterday reported a 44 per cent fall in profits for the first eight months to SKr242m (\$39.2m) from SKr432m, reflecting the current stagnation in the European building industry, writes Robert Taylor.

The company said results for 1991 were expected to be worse than last year when it made a SKr682m profit.

Sales fell to SKr14.58bn from SKr15.5bn a year earlier. NCC's international building division was particularly badly affected with a loss of SKr115m compared with one of SKr61m in the same period of 1990.

The troubles of Sweden's own construction market are visible in the company's results from its NCC Bygg division which suffered a 28 per cent drop in orders to SKr9.8bn compared with SKr13.68bn for the first eight months of last year. Profits from the division fell to SKr508m from SKr558m.

NCC's property interests also suffered with a sharp drop in profits to only SKr2m compared with SKr71m a year earlier.

The group said yesterday that redirecting its priorities to investments in foreign markets would continue and that planned property sales in Sweden would be postponed for the time being. It said that financial results on the property side would probably continue to worsen compared with last year.

The group's stainless steel manufacturer Avesta also reported a deficit of SKr17m compared with a SKr29m profit for the same period of 1990 but the loss suffered by NK, the department store, was SKr3m compared with SKr67m for the first eight months of last year. Passenger line Elfin dropped to SKr29m.

Mannesmann deal raises a groan

Christopher Parkes on the German group's acquisitions strategy

The investment community groaned in 1987 when Mannesmann, the German engineering group, bought Europe's largest clutch maker, Fichtel & Sachs. It groaned again yesterday when it announced an agreement to buy control of vehicle instruments and controls specialist VDO Adolf Schindling.

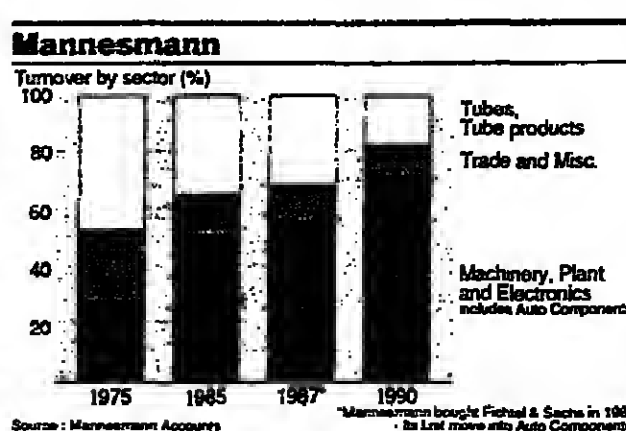
The complaints were the same on both occasions: Mannesmann had paid too much, and if it really wanted to escape the cyclical clutches of its basic steel tube business, what on earth was it doing shovelling funds into the cynical and crushingly competitive motor components business?

"It's a pity they can't find anything better to do with their money," one analyst remarked. "They should have left it in the bank."

Mannesmann has not disclosed the price of the acquisition. But Siemens, which also bid, hinted yesterday when it said it regretted not having succeeded, adding that the controlling Schindling-Rheinberger family wanted too much.

Even so, Mannesmann's money is still pouring into components. Last year while Fichtel & Sachs's orders and sales fell, it spent DM277m (\$161m) buying up the division - 22 per cent of the group's total capital investment - compared with DM241m in 1989.

Mr Werner Dieter, chairman, had once nurtured other ambitions and spending priorities. He announced two years ago that he was looking for a big buy in the US, a market which



Source: Mannesmann Accounts

Mannesmann bought Fichtel & Sachs in 1987. Its last move into Auto Components was the takeover of VDO.

in 1990 accounted for only DM22bn of total group sales of DM24bn. Earlier this year he said it was a pity he had ever mentioned the idea: negotiations on several prospective deals had failed.

The main thrust of Mr Dieter's strategy, however wrong and costly it is considered to be outside the Düsseldorf headquarters, continues at speed. Mannesmann is becoming a technology-led company, characterised by the clear shift from the old steel and tube base, which in 1975 accounted for almost 50 per cent of sales.

By 1990, the proportion was down to just 17 per cent, while plant and machinery, formerly 29 per cent of the business, grew to 47 per cent. Last year, before the acquisition of a controlling stake in Boge, with sales of DM750m, vehicle components were 13 per cent of turnover, while plant and machinery, VDO had sales of DM2.2bn in 1990, and this year reported

sales of at least DM8bn.

While not on the same scale as the likes of Robert Bosch, which has components business worth DM18bn a year, it has, in four years, built from scratch a new business offering a virtually full product range, encompassing wheels, clutches, suspension gear, brakes, axles, instruments and body mouldings, and employing more than 40,000 people.

Disgruntled analysts suspect more acquisitions will fill out the range, and although Mannesmann said yesterday the VDO factories and workforce would be kept intact, the size and scope of the group's components business suggests the time for consolidation and restructuring cannot be far away. Group profits fell 27 per cent in the first half of this year while motor parts sales and orders dropped 1 per cent and 2 per cent respectively.

Mr Marcus Bierich, chief executive of Robert Bosch, said during the summer that profits from his automotive components divisions "fell drastically" in the first six months of this year. Motor industry pressure for price cuts was growing, he said, under short-term pressure from falling sales, and under a longer-term squeeze from Japanese car makers pushing deeper into Europe.

With such weighty matters before him, Mr Dieter may see no real future in his technology-led combine for the bicycle business which came with Fichtel & Sachs, nor for the swanky Jaeger-LeCoultre Swiss watch brand which is part of the VDO package.

Dassault plunges to FFr194m

By William Dawkins in Paris

DASSAULT Aviation, the French maker of military and business aircraft, reported a 26 per cent decline in group profit for the first half of the year, as a sharp fall in new orders.

The group, headed by Mr Serge Dassault, saw a 25 per cent decline in consolidated sales from FFr6.8bn (\$1.53bn) in the first half of 1990 to FFr5.2bn in the same period of this year. Consolidated profits fell 11.8 per cent from FFr339m to FFr299m.

Group profits, after minorities, fell more steeply from FFr289m to FFr194m. Exports

accounted for 60 per cent of sales.

New orders taken in the first half - of which 36 per cent came from civil and space industry customers - dropped to FFr3bn from FFr 6.5bn in the same period in 1990. However, the figure was not indicative of the likely volume of orders for the full year, said the group. It expected full-year turnover to reach FFr6bn, which would be well down on the FFr18.8bn reported last year.

Development of the Rafale, the new fighter aircraft due for

delivery to the French military in 1996, was proceeding on target. Three prototypes were currently undergoing trials, said Mr Dassault.

The Falcon 50 and 300 business jets were showing good sales, after a slowdown at the start of the year due to the impact of the Gulf crisis.

Meanwhile, development of the new Falcon 2000 medium-sized business jet - due for service from 1994 - was on schedule. A prototype was under construction with co-operation from Alenia, the Italian aerospace group.

Granada names chief executive

By Jane Fuller in London

MR GERRY Robinson, who led Compass Group through what was briefly the UK's largest management buy-out, has been appointed chief executive of Granada Group, the British television, leisure and computer services concern.

Last week Granada retained its UK television franchise for £3m, in spite of being spectacularly outbid by North West Television, which fell at the quality hurdle.

On the same day, it cut 550

jobs as part of a radical reorganisation of its loss-making computer maintenance business. The poor performance was a main reason for the departure of the previous chief executive, Mr Derek Lewis.

His resignation in May was seen as a sacrifice required to clear the way for a rights issue, which came in July. It brought in £163m (\$282m). The proceeds, together with the £17m sale of bingo clubs, cut group debt from £534m to £340m.

Granada, which cut its interim dividend, had earnings per share last year not much above the 1989 figure of 1.5p. Mr Robinson said his job would be to "look at the basics in terms of improving profitability". He said his experience at Compass would help him in dealing with Granada's motor-vehicle services, computer maintenance and TV rental operations.

Lex, Page 22
Observer, Page 20

Beghin-Say down

BEGHIN-SAY, the French food manufacturer Avesta also reported a deficit of SKr17m compared with a SKr29m profit for the same period of 1990 but the loss suffered by NK, the department store, was SKr3m compared with SKr67m for the first eight months of last year. Passenger line Elfin dropped to SKr29m.

Investor frustration holds secret of trust's success

THE SECRET of the success of MAG's new income investment Trust may lie in the frustration of private investors over the government's insistence on individual share ownership, writes Norma Cohen in London.

The Trust, which raised a record £246m after a well orchestrated - and well financed - publicity campaign, saw the bulk of demand from those who wished to put the securities in their tax-efficient Personal Equity Plans.

In her desire to see individuals own shares in individual

companies, Mrs Thatcher's government designed PEPs in 1987 and set a limit on the percentage of funds that could be invested in collective investment schemes.

Currently, up to £5,000 per year can be put into a PEP, with all investments free from capital gains or income tax. However, no more than £3,000 can be put into a collective investment and at least half must be invested in the UK.

Thus, those individuals chary of their ability to pick stocks wisely, or who are concerned about achieving sufficient diversification, have been

unable to take full advantage of a PEP's tax relief.

Mr David Boutell, of Chase de Vere, an independent financial adviser and producer of the monthly PEP Guide, said that most individuals find that managing a portfolio of eight to 10 stocks is awkward and expensive, but that fewer stocks expose the investor to greater risks. Thus, collective schemes make more sense. "We thought the M&G trust was a good idea and recommended it heavily to our clients," he said.

Despite intensive lobbying from the operators of collective

investment schemes, the government has held firm in its insistence that no more than half a PEP can be invested that way.

M&G's new fund allowed individuals to take advantage of a loophole in the current PEP legislation enabling them to put all their funds into a new equity offering. During the 42-day initial offering period of the Income Investment Trust, its shares are eligible.

However, once the offer closes, it will no longer be a suitable PEP investment beyond the £3,000 limit.



Proposed Privatisation of Heracles General Cement Company S.A.

As part of the Greek Government's privatisation programme, Industrial Reconstruction Organisation S.A. ("IRO"), a holding company controlled by the Greek state, is proposing to offer for sale a block of shares representing approximately 69.8% of the issued share capital (the "IRO Shareholding") of Heracles General Cement Company S.A. ("Heracles"). IRO has appointed Morgan Stanley International and National Investment Bank for Industrial Development S.A. as its joint financial advisors for this transaction.

Heracles is the largest producer and exporter of cement in Greece. Its shares have been listed on the Athens Stock Exchange since 1919.

Persons interested in participating in the offering programme who believe that they have the necessary financial and business capacity to consummate an acquisition of the IRO Shareholding expeditiously and to contribute to the development of the Heracles Group, are invited to express their interest in writing directly to Morgan Stanley International and National Investment Bank for Industrial Development at the following address by no later than 5 p.m. (London time) on 31 October, 1991.

Morgan Stanley International
Kingsley House
1A Wimpole Street
London W1M 7AA
England

For attention of:
Heracles Privatisation Team
Mergers & Acquisitions Department
Telephone: (44 71) 709 3900
Telefax: (44 71) 709 3912

Those parties who are invited to participate in the offering programme will be required to sign a Confidentiality Agreement before they are provided with information regarding Heracles, the IRO Shareholding and the offering procedures.

IRO reserves the right in its sole discretion to conduct such enquiries as it or its advisors may consider appropriate regarding the ability of any party to consummate the proposed transaction and to disallow any party from participating in the offering programme.

This advertisement has been approved by Morgan Stanley International, a member of the Securities and Futures Authority, for distribution in the United Kingdom. This advertisement does not constitute an offer for sale.

22 October, 1991

October 1991

This announcement appears as a matter of record only.

IKTISAT BANKASI

US\$32,000,000
Trade Finance Facility

Lead Manager

The Bank of New York

Manager

Girozentrale und Bank der Österreichischen Sparkassen Aktiengesellschaft

Co-Managers

The Arab Investment Company S.A.A.

Baden-Württembergische Bank AG

Banca CRT - Cassa di Risparmio di Torino, (London Branch)

Banca Popolare di Milano, (London Branch)

Banco Ambrosiano Veneto

Banco di Roma, (Frankfurt Branch)

Bankhaus Gebrüder Bethmann

Bayerische Vereinsbank AG

Berliner Bank Aktiengesellschaft

BfG Bank AG, Frankfurt

BRED Paris

Commonwealth Bank of Australia

Iran Overseas Investment Bank Limited

Österreichische Länderbank AG, Vienna

S.A. Crédit à l'Industrie - N.V. Krediet aan de Nijverheid

SBN Bank/Sparkassen Noordijland A/S

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THE BANK OF NEW YORK

Firm demand for \$200m Yokohama 10-year deal

By Tracy Corrigan

ONLY a handful of deals emerged in the European market yesterday, as banks concentrated on distributing Japanese yen-denominated bonds which had accumulated over the last week or so.

The City of Yokohama brought a \$200m 10-year deal, guaranteed by the Japanese government. The bonds were considered reasonably priced to offer a spread of 45 basis points above the US Treasury, and dealers reported firm demand from investors in the Far East.

With many outstanding bonds trading at substantial premiums to par, there remains a healthy appetite for

INTERNATIONAL BONDS

bonds trading around par or below.

Demand for relatively high yielding markets remains firm, and deals in Australian dollars and lire fared well. Investors are keen to buy in markets where they can expect to make capital gains, even though yields margins over other markets have shrunk.

Tasmanian Public Finance Corporation's A\$75m deal met firm demand, particularly from German retail investors, to

trade at less than 1% bid, well within fees of 2% points.

A \$150m issue of seven-year bonds from an arm of Deutsche Bank also sold well to European retail investors.

Meanwhile, rumours that Sweden is preparing to tap the Canadian dollar sector of the Eurobond market proved unfounded. Sweden, which has repaid close to \$3bn of its foreign currency debt so far this year, will not be borrowing in the international capital markets, at least for the remainder of the year, an official said.

The Swedish government is currently fulfilling its financing needs in the domestic market.

NEW INTERNATIONAL BOND ISSUES

Issuer	Amount	Coupon	Price	Maturity	Bank	Bank runner
US DOLLARS						
City of Yokohama (A\$75m)	200	8	100	2001	0.25% 1/4	Bank of Tokyo
Yokohama Specie Bank Ltd	75	3 1/2	100	2000	2 1/2 1/2	Baring Bros (Daiichi)
AUSTRALIAN DOLLARS						
Tasmanian Public Finance Corp	75	12 1/2	97 1/2	2001	2 1/2 1/2	Deutsche AG Cap Mkt
FRANCE						
Swedish Public Finance	150	10 1/2	100	2000	-	SBC
FRANCE						
Deutsche AG Finance	150	11 1/2	101 1/2	2000	1 1/2 1/2	Deutsche AG Cap Mkt

Private placement. *Convertible with equity warrants. †Floating rate note. ‡Final terms. a) Non-callable. b) Amount increased from \$20m. Coupon was indicated at 3 1/2%. Put option after 5 years at 105.025% to yield 7 1/2%. Conversion premium fixed at 22.21%. c) Full terms of borrower - Japan Finance Corp for Municipal Enterprises. Non-callable.

Bombardier to raise \$97m in Class B issue

By Robert Gibbons in Montreal

BOMBARDIER, the Canadian transport equipment and aerospace group that owns Short Brothers of Belfast, is raising \$97m (US\$85.8m) net in new equity through a private placement of its new class B subordinate shares at \$25 each.

The issue has been fully taken up by a syndicate led by Scotia McLeod for distribution mainly to institutions. The B stock has risen in the market from about \$15 a share earlier this year to \$27 at last Friday's close.

Bombardier's Canadian aerospace division last week signed nearly \$300m of orders for regional jets and updated water bombers. Total transit equipment and aerospace order backlog is valued at \$350m.

Investors doubt worth of currency hedging

By Simon London

MOST institutional shareholders believe companies which hedge their foreign exchange exposures are wasting their time, according to a survey by Touche Ross, the accountancy firm.

The survey was conducted by the treasury management team at Touche Ross and covered fund managers accounting for 32 per cent of the UK equity market. The team found that most institutional investors believed:

- that foreign currency exposures arising from overseas earnings should not be hedged using futures and options or other techniques. The fund managers said they preferred to make their own decisions about these risks when investing in a company.
- However, the investors

thought companies should borrow in foreign currencies to match overseas assets. This minimises the translation effect when overseas assets and liabilities are consolidated into the parent company's sterling balance sheet.

• Annual reports do not provide sufficient information about currency hedging activities;

- treasury departments of UK companies should be seen as cost or service centres, rather than as profit centres.

Earlier this year Allied Lyons, the UK foods group, revealed a \$150m loss from failed foreign exchange hedging operations. The company's losses sparked a debate over the effect and control of corporate treasury operations.

INTERNATIONAL CAPITAL MARKETS

On the road to reform in Cairo's markets

Tony Walker examines measures designed to breathe life into Egypt's trading centres

Tucked away behind Cairo's traffic-clogged Kasr el-Nil street stands the city's stock exchange, an elegant white-pillared French colonial-style building that was the scene of hectic trading earlier this century when Egypt's stock exchanges were among the busiest in the world.

These days, a dissatisfied investor could fire a shotgun at the trading floor of the Cairo Stock Exchange without causing too much disruption, since little business is being transacted in the 50 or so shares listed. In the first week of October, the volume of trading reached just \$8m, down 18 per cent on the week before.

The world stock market crash of 1987 caused few ripples in the Cairo and Alexandria bourses, which parted company with the world's financial centres after the 1932 revolution and the socialist era of Gamal Abdel Nasser.

However, all that may be about to change if the World Bank and aid donors such as the US Agency for International Development (USAID) have their way. Among the bank's most important proposals for changes to Egypt's economy is the revitalisation of its capital markets.

In early October, the bank presented Egypt with a detailed blueprint for the process of restructuring the country's moribund financial markets.

There are hopes that donors such as USAID will match the bank's plan, which is necessary for the operation of an



Trading at the Cairo Stock Exchange: weekly volume early this month was \$8m

active stock market, as well as training for Egypt's supervisory Capital Market Authority. It also wants help with new laws and regulations, and assistance in the development of such instruments as mutual funds to encourage the return of the small investor to the market.

All this is part of a wider \$300m World Bank structural adjustment programme aimed at liberalising Egypt's state-dominated economy, and paving the way for a genuine process of privatisation. Breathing new life into the capital markets is, of course, integral to this process.

One of the most urgent requirements is for new tax laws to remove discrimination against investments in equities and other such securities. At

present, bank deposits and interest income are exempt from all forms of taxation, whereas investments in stocks and bonds attract a variety of taxes.

With interest rates on Egyptian pound deposits close to 20 per cent, investors would have little incentive to switch to riskier - and taxed - equities and securities.

"We cannot really privatise without a new capital market law that equates investment with savings from a tax point of view," says Ahmed Foda, head of the Cairo-based Investments and Securities Group.

Mr Foda, whose ISG is planning to launch a \$50m offshore Egypt Growth Fund in 1992, says it is vital that Egypt

establishes a framework for the operation of financial intermediaries. "Without the active presence in the market of investment and merchant banking firms, mutual funds and other similar institutions, you can't have a viable market," he says.

One of the main impediments to reform is a critical lack of expertise in an Egyptian bureaucracy which has little experience with a market economy, let alone the technical problems associated with the operations of relatively sophisticated financial markets in the computerised era.

Farid Saad, chairman of Egyptian Finance Company, says the government should set up the "structures" and then allow the private sector

to get on with the job.

Apart from tax problems and lack of financial intermediaries, Mr Saad says exchange controls on the repatriation of proceeds of asset sales, corporate regulations that require at least 10 per cent of net profits go to employees regardless of the amount distributed to shareholders, and prohibitive transaction costs are a further burden.

Egyptian brokers charge mandatory commissions whatever the size of the transaction, at a rate of 1 per cent for equities (0.5 per cent on both the buy and sell side of each transaction), and 0.4 per cent for debt securities. There is no sliding scale, and certainly no such thing as negotiated commissions.

The remaining 16 brokers are relics. If the market is revived, however, their licenses are likely to become valuable commodities in themselves.

Fag el-Nour, chairman of the Capital Market Authority, seems committed to reform. He said recently a re-vitalised stock market was "one of the pivots of economic reform," both as a means of encouraging small investors to participate in a free market economy and for capital-starved companies to raise additional funds.

However, as Mr Saad observes, while the road to capital market reform in Egypt has long been paved with good intentions, the necessary detailed technical steps have not been forthcoming. Furthermore, capital markets can only take root, he says, in a flourishing private sector-oriented economy.

Overseas investment in Japanese bonds declines

By Christopher Bobinski in Warsaw

FOREIGNERS trimmed their continuing monthly investment in Japanese bonds by taking profits during September. However, several classes of local investors entered the market, according to a private monthly report, AP-DJ reports from Tokyo.

As short-term interest rates started falling sharply and the yen rallied, Japanese long-term credit and trust banks, credit associations, other financial

institutions and commercial companies started to invest in bonds after selling them in the run-up to August. Insurance companies marketed stepped up their investments, the report by the Japan Securities Dealers Association indicated.

Large and regional commercial banks continued to unload bonds, and overall monthly investment shrank. New investment curbed the outflow, however.

Polish confectioner shares on offer

By Christopher Bobinski in Warsaw

THE POLISH government is today offering to the public 640,000 shares worth Zl 83.20m (US\$4,696m) in Wedel, the confectionery company.

This is the first time in Poland that shares are being sold to the public after a Western investor has already taken a stake. PepsiCo, the US drinks and snacks group, has already purchased 40 per cent of the stock.

PepsiCo paid US\$19.5 per share. Another 20 per cent of

the shares are being offered to the Wedel workforce, while the government is retaining 20 per cent to control the execution of a management contract between Wedel and PepsiCo.

One third of the Wedel issue is in preference shares, and each gives its owner five votes at the company's general meetings. All the preference shares are held by PepsiCo.

The company is committed to an investment pro-

gramme, worth US\$56.2m, which is designed to increase Wedel's capital. PepsiCo will end up with 67 per cent of the stock.

THE Polish Brokers Company has become the first to offer a money-broking service to Polish private and state-owned banks, the company announced yesterday.

The company is wholly-owned by the Polish Investment Company, and employs four people.

LONDON MARKET STATISTICS

RISES AND FALLS YESTERDAY

British Funds	Rises	Falls	Same
Corporations, Domestic and Foreign Bonds	21	11	951
Financial and Property	21	11	951
Others	21	11	951
Totals	417	633	1,700

EQUITIES

Index	Point	Change	High	Low	Open	Close	Settle	Vol	High	Low	Open	Close	Settle	Vol
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00

FIXED INTEREST STOCKS

Index	Point	Change	High	Low	Open	Close	Settle	Vol	High	Low	Open	Close	Settle	Vol
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00

RIGHTS OFFERS

Index	Point	Change	High	Low	Open	Close	Settle	Vol	High	Low	Open	Close	Settle	Vol
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00

TRADITIONAL OPTIONS

Index	Point	Change	High	Low	Open	Close	Settle	Vol	High	Low	Open	Close	Settle	Vol
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00

LONDON TRADED OPTIONS

Option	Index	Point	Change	High	Low	Open	Close	Settle	Vol	High	Low	Open	Close	Settle	Vol
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00

FT-Actuaries SHARE INDICES

Index	Point	Change	High	Low	Open	Close	Settle	Vol	High	Low	Open	Close	Settle	Vol
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00

FT-Actuaries SHARE INDICES

Index	Point	Change	High	Low	Open	Close	Settle	Vol	High	Low	Open	Close	Settle	Vol
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00
100 F.P.	100	0.00	100.00	99.99	100.00	99.99	100.00	100.00	100.00	99.99	100.00	99.99	100.00	100.00

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UK COMPANY NEWS

Second legal action taken in US to repel generic drug makers Glaxo faces new attack on patents

By Paul Abrahams and Bernard Simon

GLAXO, Britain's biggest pharmaceutical company, yesterday fired a second salvo in the defence of its patents for Zantac, the ulcer treatment which is the world's best selling drug.

The company has started legal action in the US against Novopharm, one of Canada's largest generic drug manufacturers. This follows Glaxo's decision last April to fight Canadian patent law, which like Novopharm has also filed an abbreviated new drug application to produce a generic version of Zantac. In both cases, Glaxo claims the companies will infringe one of the two patents protecting Zantac.

The implications for Glaxo if it loses the patent battle are potentially serious. Generic drugs have in the past taken as much as 50 per cent of the market of a previously patented drug within two years.

With sales of £1.6bn a year, Zantac represented 47 per cent of Glaxo's sales in the year to June 1991, and probably more of its profits. About half of Zantac's sales are in the US. Glaxo's dependency on Zantac is, however, declining as other products come on stream. Its share price fell 15p to £14.23.

Glaxo said it believed it had valid patent property in the US extending at least until 2002. It said it had not been surprised by additional generic drug manufacturers attacking its

patent and would not be surprised if other companies followed Novopharm's lead. Analysts are divided over the strength of the Form 2 patent. Ms Lisa Arnold, an analyst at County NatWest, argued that Zantac is safe until the end of the century. However, Mr Robin Gilbert, a pharmaceutical analyst at James Capel, said few people in the industry believe Glaxo stands a chance when it tries to defend the patent.

The question is not whether Glaxo has an excellent future, said Mr Gilbert. "The company has plenty of good products in the pipeline. The question is whether Glaxo's future is spectacular."

form of ranitidine hydrochloride in which Zantac is marketed. It is the validity of the Form 2 patent, which expires in the US in 2002, that the two companies are challenging.

Echoing the arguments of other generic manufacturers which are challenging Zantac, Mr Leslie Dan, owner and chief executive of Novopharm said yesterday that he "has reason to believe" that Form 2 is invalid. The main challenge to Form 2 is that it does not differ significantly from Form 1.

Glaxo said it believed it had valid patent property in the US extending at least until 2002. It said it had not been surprised by additional generic drug manufacturers attacking its

Amber Day beats recession with £10.1m

WITH EVERYONE wanting a bargain in the recession-hit UK, the Amber Day retail group more than trebled its profit last year thanks to its What Everyone Wants discount chain, writes Jane Fuller.

The taxable figure rose from £3.02m to £10.1m in the 53 weeks to August 3, on turnover of £108.2m (£11.2m). It had been predicted with the £24.4m rights issue in June - the second cash call in little more than a year - that profit would reach £8.75m.

What Everyone Wants was the driving force behind the growth. Its 44 shops in Scotland and the north of England contributed £13.1m operating profit.

The menswear chains, Woodhouse and Review, lost more as they succumbed to the sector's weakness in the south of

England. The combined operating loss of £204,000 compared with a profit of £13.7m.

Mr Philip Green, chairman and chief executive, was candid about the focusing of effort on WEW, rather than on the menswear stores acquired in 1988-89, his first year as head of the group.

WEW's operating profit margin was 16 per cent on turnover of £31m. He said margins had been enhanced by the computerised gathering of sales information, the tight control of stock and the low cost base of its sites. The discount chain's products include clothes, household goods, toys and perfume.

With the rights issue proceeds coming in just before the year-end, net debt was cut from £23m in July 1990 to virtually nothing. The issue restored the group to

net worth of £22m.

Mr Green anticipated that the debt position would be similar at the end of this year, after the opening of a dozen new WEW stores and some refurbishment, giving a total capital spending budget of £3m to £4m (£3.2m). He stressed that no further acquisitions or share issues were planned.

The average number of shares went up from 51.6m to 91.7m last year. As a result, earnings per share grew less rapidly than profits to 7.05p (£2.9p). The June 1-for-3 issue will have a further impact on share numbers this year.

Import and distribution increased its profit to £1.12m (£447,000). Interest costs rose to £3.55m (£150,000 received). A final dividend of 1.5p makes a total of 2.7p (2p).

Advertising fall leaves Southern News at £8.6m

SOUTHERN Newspapers, the regional publisher which received a number of bid approaches, yesterday revealed that pre-tax profits slumped from £15.05m to £8.6m over the year to end-June as the recession in the south of England hit advertising revenues, writes Clare Pearson.

Profits from newspaper printing and publishing dropped to just £3.1m (£7.9m) as turnover fell from £77.1m to £71.4m.

A surplus on disposal of investments, including shares in Reuters, the news agency and information group, and Associated British Ports, accounted for £5.9m (£5.5m) of

profits. However, Mr John Salkeld, who joined the board in March and this month became chairman, indicated in his annual statement that the outlook for the current year was brighter. Revenues appeared to have stabilised, he said.

He added that the company had the "management and financial strength to continue trading successfully as an independent group." The final dividend is maintained at 7.5p for an unchanged yearly total of 10.5p.

Mr Salkeld said yesterday that the group's financial position was strong; its bank overdraft, net of cash, amounted to

only £578,000, and it was less than 15 per cent geared. The Monopolies and Mergers Commission is due to report by Thursday on the bid approaches - which include those from Pearson, which publishes the Financial Times, and Reed International, the publishing group - to Mr Peter Lilley, the trade and industry secretary.

On the basis of the last quotes for shares in Southern, which change hands under the Stock Exchange's matched bargain rules, the group is capitalised at about £70m and the stock is trading on a multiple of about

30 times last year's earnings and printing. Evidently, the valuation owes a great deal to the expectation of bids emerging. The referrals of the five in July were made on the basis of the concentration of paid-for circulation to which the mergers would give rise, but the City is not expecting the MMC to block them. Any defence may be expected to make much of Southern's recent board appointments and a group reorganisation being carried out. The shareholder list includes M & G Investment Management and Portsmouth and Sunderland Newspapers, with about 5 per cent apiece.

P&P shares plunge after profits warning

By Alan Cane

SHARES IN P&P, one of the UK's largest distributors of personal computers, halved in price yesterday after the company warned it was unlikely to make a profit in the second half of the year. As a consequence its full year figures would be well below market expectations.

The City reacted with surprise to the announcement and knocked the shares down from 101p to 50 1/2p.

The market had been predicting pre-tax profits of £6m-£8m for the full year, after the company made £3.3m on sales of £120m in the first half. Now it seems unlikely that P&P, chaired by Sir Roland Smith, former head of British Aerospace, could turn in profitable

six months figures before the second half of 1992. Traditionally, the second half is P&P's strongest sales period. This year sales did not materialise as customers struggling with the recession froze expenditure on personal computers and other capital items.

Analysts said they would have appreciated earlier warning of the problem. Their sense of shock was deepened by the fact that the company had appeared to perform well in the first half despite chaotic conditions in the PC market. Margins were being cut to the bone through a combination of fierce price competition and the falling cost of computer hardware which had devastated some PC distributors.

P&P had been restructuring with the intention of improving the quality of earnings through a greater emphasis on consulting services, which commanded substantially greater gross margins than PC sales. The restructuring measures had been brought forward by 12 months but yesterday's warning indicated that P&P is still very dependent on volume sales of PCs. The company announced a further 60 redundancies.

It claimed the balance sheet was still strong and that it would recommend an unchanged final dividend. That would do little to comfort Scottish Amicable Investment Managers, which bought 5m P&P shares just before the price crashed.

Institutions threaten to take joint action against Hanson

By Roland Rudd

HANSON's institutional investors are threatening to come together to put pressure on the conglomerate to change its managerial style.

The big investors were yesterday responding to a letter sent to them from Mr Peter Harper, Hanson's director in charge of investor relations.

The letter stressed Hanson's 27 years of uninterrupted growth and increase in earnings per share, and concluded that the conglomerate's strategy would remain to increase shareholders' value.

It was criticised by fund managers as "arrogant", "misguided" and "unsatisfactory".

One said "it completely failed to address the issues raised. Lord Hanson must take note of what we are saying or we will be forced to get together to increase our influence."

Although it is unlikely to

involve all the big shareholders, the threat to meet in union is without precedent with Hanson.

Institutional investors want Lord Hanson to take account of criticisms over the company's corporate governance and want it to change its managerial style.

In particular, they want more independent non-executives appointed to the board, an explanation of the role of Lord White - head of Hanson Industries in the US but not a main board member - and some idea of who might succeed the two 69 year old Lords.

The biggest shareholders include Prudential Portfolio Managers, Norwich Union Life Insurance Society, Standard Life Assurance, Postal Investment Management, Legal & General Investment Management and Scottish Widows Fund Management.

Meanwhile, Hanson's offer document for Beazer - which gives a detailed breakdown of earnings in order to comply with US securities laws - shows that, for the first time in 27 years, UK profits have fallen in the first nine months of the company's trading year.

Pre-tax profit in the UK to the end of June fell from £443m to £388m, while in the US pre-tax profit rose from £311m to £432m.

The offer document also makes clear that the sale of Newmont Mining Corporation in December 1990 realised a profit of £170m which was taken above the line.

If it was taken below the line Hanson would not have been able to increase its overall pre-tax profits which went up from £393m to £367m for the nine months to end-June.

Hanson's shares yesterday fell by 3 1/2p to 217p.

GrandMet acquires ouzo distiller

By Kerin Hope in Athens

GRAND METROPOLITAN, the UK food, drinks and retailing group, has bought Kaloyannis Brothers, Greece's leading ouzo producer, consolidating its presence in the Greek drinks market.

GrandMet acquired a 30 per cent stake in the distillery in 1989, together with distribution rights abroad, as part of its takeover of Metaxa, the family-owned Greek brandy maker.

The group paid Dr7.4bn (£23.7m) for the remaining 70

per cent of Kaloyannis, owned by Mr Spyros Metaxas.

Kaloyannis makes Ouzo 12, the most popular aniseed-flavoured aperitif in Greece, with a 40 per cent share of the market.

The company reported losses of Dr88,000 on turnover of Dr2.95bn in 1990. However, sales abroad have improved since GrandMet took over distribution of Ouzo 12.

Exports to Germany, the main foreign market for Greek

wines and spirits, doubled last year to 200,000 cases. Ouzo 12 is also the top-selling ouzo brand in international duty free shops, Metaxas said.

Overall consumption of ouzo in Greece is declining, driving small distillers out of business. Marketing of well-known brand names is becoming increasingly aggressive as larger producers compete to keep their market share, especially in the main tourist resorts.

NEWS DIGEST

Bourne End £796,000 in the red

BOURNE End Properties incurred a loss of £796,000 in the first half of 1991, described by the directors as "a creditable performance" given circumstances in the investment property market.

It compares with a £2.27m deficit in the second half of last year and with a profit of £65,000 for the first half. The interim dividend is passed (1p) but that decision should not be taken as indication of the final directors' stance. Losses per share were 9.9p (earnings 0.77p).

Interest charges were £2.44m (£1.25m). No interest was capitalised this time (£250,000).

Improvement for Clydesdale Trust

Over the six months to September 30 net asset value at Clydesdale Investment Trust improved from 95.04p to 98.57p. A year earlier it stood at 91.82p.

In the half year total income rose from £344,000 to £396,000 and earnings per share moved ahead from 3.45p to 4.11p. The dividend is again 3.45p with an unchanged final of 2.45p.

The results excluded Wemyss Coal, a wholly-owned dealing subsidiary. It is paying a dividend of £300,000 for the year (£50,000).

Danbury £5.8m loss after exceptionals

Danbury Group, the property and housing company, turned in an operating loss of £1.1m for the year to March 31, knocked up to a pre-tax deficit of £5.77m after a £4.69m exceptional charge resulting from writing down the value of some developments.

This compared to a £1.24m loss last time after a £2.3m exceptional charge. Turnover was down at £3.25m (£3.93m). There is no dividend (0.56p).

W&M holds 32.4% of Invergordon

Whyte & Mackay has acquired a further 1.31m ordinary shares (1.3 per cent) in Invergordon Distillers, increasing its holding in the Scotch whisky group to 41.2m ordinary shares, representing 32.4 per cent of the equity.

DIVIDENDS ANNOUNCED

	Current payment	Date of payment	Corresponding dividend	Total for year	Total last year
Aberdeen Steak	£1.1m	1.8	Dec 20	1.3	0.75
Amber Day	£1.1m	1.8	Dec 20	1.3	2
Bourne End	£1.1m	1.8	Dec 20	1.3	2
Clydesdale Inv	£1.1m	2.45	Jan 6	2.45	3.45
Danbury	£1.1m	0.56	Nov 29	0.56	0.56
Southern News	£1.1m	7.5	Nov 29	10.5	10.5
Sphere Invest	£1.1m	0.9375	Nov 29	0.9375	3.87

Dividends shown pence per share not except where otherwise stated. US\$M stock. Total to date is 2.8125p.

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Tough going for Aberdeen Steak

After providing £3.2m for estimated losses on disposal of closed branches, Aberdeen Steak Houses finished 1990 with a pre-tax loss of £3.27m. The comparative profit was £186,000.

Despite the conditions in the property market a number of purchases have been made, said Mr Ali Salih, chairman.

Turnover rose to £16m (£15m). Losses per share were 23.5p (1p) and there is no dividend (interim 0.75p).

Mr Salih told shareholders that work on a proposed offer for the minority shares which would take the company private have been shelved pending an improvement in the economy and completion of the disposal programme.

When mooted in August it was said the price was unlikely to be "materially different" from the 87p at which the company joined the USM in 1985. Yesterday, the shares fell 5p to 25p.

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As of 19th October 1991 the principal amount of such Bonds remaining in circulation was
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Luxembourg, 19th October 1991
EUROPEAN INVESTMENT BANK

Woolwich - Building Society -

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COMMODITIES AND AGRICULTURE

China to join tin producers' association

By Kenneth Gooding, Mining Correspondent

CHINA, THE world's second-largest tin producer, is joining the Association of Tin Producing Countries, the association that is attempting to stabilise the market by setting export quotas to compensate for the huge stocks that have been hanging over the market since the 1985 collapse of the International Tin Council's price support scheme.

Analysts suggested yesterday that China's move might have a short-term favourable impact on tin market sentiment and should in the longer term give the association more control over supplies when prices started to rise again.

However, the London Metal Exchange price of tin for immediate delivery last night closed \$12.50 down on Friday's level at \$6.565 a tonne.

Depressed by overhanging stocks, tin prices have been exceptionally low and this has forced Malaysia and Thailand to cut output by nearly one-third and caused widespread mine and smelter closures throughout the rest of the world.

China will join Australia, Bolivia, Indonesia, Malaysia, Nigeria, Thailand and Zaire in the ATPC which is working to cut stocks, but at present about 45,000 tonnes, to below 20,000 tonnes.

The ATPC set members an export limit of 95,849 tonnes for 1991. It is considering a proposal that quotas should be cut

by 9 per cent in 1992. The association suggests that China exported 15,844 tonnes of tin concentrates last year, up from 10,000 tonnes in 1988.

Mr Gnanjar Kartasasmita, Indonesia's mines and energy minister, said at the association's meeting in Canberra yesterday that this target should be reached in two years.

Mr Fidelis Madavo, analyst at the Commodities Research Unit, said China's move was "a vote of confidence in the ATPC". He pointed out, however, that the tin market's main concern was Brazil, now the world's biggest producer, and Brazil had still to be persuaded to join the producers' association.

Mr Andy Shaw, at Metals & Minerals Research Services (MMRS), said that Brazil remained the key element in the market although its output was likely to fall below 30,000 tonnes this year.

The tin market was also suffering from the total collapse of exports to the former Soviet Union which used to take 15,000 to 16,000 tonnes of tin a year from western producers.

Mr Shaw said that, despite the Soviet problems, it was likely that "by the end of 1992 the tin stock overhang might show clear signs of having disappeared and, in the absence of a rapid response from producers, prices could yet set \$3 a lb (\$11,020 a tonne) in the later stages of that year."

Squabbles delay Soviet oil and gas development

By John Lloyd in Moscow

SQUABBLES between officials at local and state level is delaying the award of the contract to exploit the rich oil and gas reserves off Sakhalin, in the Soviet Far East. Leading contenders for the contract, worth over \$6bn, said yesterday that they expected no decision until next month.

Reports in the Soviet and Japanese press over the past few days have indicated that a decision has been made either in favour of the consortium made up of the US Exxon Corporation and Sodeco, a majority-owned Japanese oil exploration group, or the "3M" consortium made up of Marathon and McDermott of the US and Mitsui of Japan. However, a representative of Sodeco in Moscow, Mr Shigeru Moriyama, said last night: "We want a decision, like everyone else". The failure to agree so far stems from the chaotic situa-

tion in the industry's governing bodies - as the old Soviet Ministry of Oil and Gas is dismembered and largely reformed into Russian-level structures. At the same time, a committee in Sakhalin is claiming the right to have the final say on granting the concession.

The Sakhalin field, the exploration of which had been entrusted to a Japanese consortium - including Sodeco - in the 1970s before being stopped after disagreements, is estimated to have a capacity of between 5m and 7m tonnes of oil a year over a 20-year productive life, and 15m-20bn cubic metres of natural gas.

● The price of the Organisation of Petroleum Exporting Countries' basket of seven crude last week moved closer to the \$21-a-barrel reference price, averaging \$20.76, up from \$20.50 the previous week.

Surveying Britain's 100,000 forgotten farmers

Bridget Bloom reports on a study of holdings that are too small to figure in official statistics

THE TYPICAL English farmer owns 25 acres and makes a profit of £200 a year. True or false?

True and false. According to a new study that appears to turn on its head the conventional wisdom that Britain has the largest and most efficient farms in Europe, very small farms constitute more than 40 per cent of all agricultural holdings in the UK.

The study, conducted by the agricultural departments of ten British universities over the last four years, has produced some superficially astonishing conclusions.

According to Professor Tony Giles of Reading University, one of the survey's principal authors, out of the UK's 240,000 holdings, at least 100,000 fall into the very small farm category, averaging no more than 11 hectares (27 acres).

What's more, "in England in 1988 the average net farm income on these holdings was a mere £300, falling to £200 in 1989". Yet "off-farm income averaged £12,500 in 1988, rising to £13,500 in 1989", the study's last report says.

Yet these small farms are in another sense quite atypical of British farming. Important though they obviously are in terms of people and perhaps, as the report says, "in the context of such current issues as rural depopulation, regeneration of the rural economy and the care and appearance of the countryside", they are of negligible agricultural significance, accounting for only 2 per cent of all agricultural production.

Indeed, it may be legitimate to ask, as does Mr David Curry, junior UK farm minister, whether they should really be classed as farms at all.

Who are the 100,000 or so farmers and what is or should be their role in the UK's changing farming scene?

The facts covered by the study were those deemed too small to appear in the National Farm Business survey, which was why the government decided to fund research into them. This involved interviews from a sample of 300 holdings in 1986 and 1987 and 1,100 in a



Garden centres and nurseries are among the most profitable of the very small holdings

different sample in 1988-89. Although the survey's academic authors are chary of hard and fast conclusions and avoid political judgments, the four survey reports highlight great variations among small farms, while also identifying key characteristics that apply to virtually all of them.

Least typical are what the survey terms "amenity farming", most frequently found in the "stockbroker belt" in southern England. Here, in counties like Kent, Sussex and Surrey, where land values are highest and unemployment has been the lowest in the UK, around 50 per cent of the small farms fall into this category.

Land and buildings are acquired with a desirable house and "agricultural activities carried out are largely for pleasure".

In these richer areas about a quarter of the remaining holdings belong to retired people, while high-profit commercial holdings (mainly garden centres and associated nurseries) are also important. Of less significance are small farms with low incomes on which farmers

are dependent. In parts of the country, however, this situation is reversed. In Wales nearly a quarter of the farms in the survey have a "very low" standard of living with "an element of struggle in making ends meet financially".

Two-thirds of the Welsh farmers are over 50 years old, a third over 65 and many are in poor health or unemployed. In the south-west - including Devon and Cornwall - very small farms constitute 30 per cent of all agricultural holdings and although two-thirds of the farmers interviewed were over 50 years old "there were also a significant number of younger farmers and families with dependent children".

While in economic terms farm incomes are generally very low, averaging only £343, the cash income (even excluding a very useful - provided essential - supplement to other non-farming sources of income).

On average, non-farm income in the south-west, two-thirds of which came from waged employment, was £9,356 in 1988, says the report.

In the same year, equally low incomes were registered for very small farms in eastern England - which also includes some of the biggest and richest farms in the UK. Average net small farm income there was £300, with non-farming income an annual £9,200.

According to the report "most farmers could not even subsist on these farms if they did not have outside sources of income. Even this, at between £7,000 and £15,000 a year including unearned income, was small by national household income levels". The report adds that small farmers across eastern England also had to find average interest payments of nearly £2,400 a year.

Across the country therefore, despite variations of geography, soil and type of farming (very small dairy farmers for example have generally performed better than mixed farms), a picture emerges of part-time farmers operating at the margins of commercial agriculture. This impression is enhanced

by the characteristics they survey refers to poor management. While farmers and their spouses spend almost as many hours working on the farm as on their other jobs, farm profits are virtually non-existent.

Yet in one of its most telling observations the report notes that while many may have become small farmers because they hoped that would be the first step on the ladder to bigger and better things, they were relatively content with their present lot. "There does not appear to be a permanent class of small farmers... one aspires to, rather than belongs to the small farmer class," the report says.

If this observation is correct, Britain's very small farmers are clearly not a downtrodden peasant class. Yet neither are they, despite some similarities, quite like the Bevarian part-time farmer who also earns a hefty salary each month from, say, BMW and gets substantial support from the EC.

Although the report has sadly few details, Britain's small farmers are so far at the margin that they appear to benefit very little from the annual (£300m) budget of the European Community's Common Agricultural Policy. As the report puts it, the study identified few holdings whose occupiers could claim, because of primary dependence on farming as a livelihood, to be valid targets of agricultural support.

However, whether or not this means that they have no political significance as the EC strives to reform the CAP is open to question. Farm Commissioner Mr Raymond MacSharry's proposals quite clearly favour Europe's small farmers, both by compensating them for the most severe price cuts and by offering "production neutral" aid. This emphasis on the small farmer, which pleases much of the EC, is the principle reason why the proposals have evoked such hostility from the UK, where according to official statistics, there are some 120,000 commercial

holdings but 29,000 farmers account for 55 per cent of total production.

Observers suggest that Britain's very small farmers could gain substantially from the MacSharry reforms. Mr Sean Rickard, the National Farmers' Union's Chief economist, believes this to be the case, although, not surprisingly, he deplores the possibility that as a result "very large chunks of public expenditure could be devoted to people who are no more dependent on farming than you or I".

David Curry agrees. "It is quite clear that Britain's very small farmers do not need aid from Brussels, since they have already chosen to work the land without profit," he says.

Ministers and NFU officials both argue that very small farmers have a role, albeit often a passive one, in the restructuring of Britain's agriculture. Mr Rickard for example points out that very small farms have grown in number, though declined in area, over the last decade, as middle size farms are split up to become small holdings and parts of larger farms.

Ministers will certainly resist pressure to increase aid to the very small farmer, even if they have not yet produced policies to cope with the implications of what the report says are their "distinctive" role in the countryside.

A further question remains for policy makers: if so many of Britain's farmers have been able to remain on the land and yet find most of their income from outside farming, have the fears been exaggerated of the effect of agricultural reform and of declining farm incomes that this will bring?

Is it possible that as farm incomes decline, more farmers will become part-time, looking after the land but otherwise not being a burden on the taxpayer?

Very Small Farms "A Distinctive Role: Is the last of four reports published in 1991 by the University of Reading's Department of Agricultural Economics and Management."

Iran becomes biggest customer for Sri Lanka's tea

By Mervyn de Silva in Colombo

IRAN HAS displaced Iraq as the biggest buyer of Sri Lankan tea. However, both Iraq and Jordan are once more active bidders at the Colombo tea auctions.

There was a sharp fall in Iraqi and Jordanian tea purchases soon after the Gulf crisis and Iran has slipped into Iraq's long established position as the top tea buyer.

In the first eight months of the year, Iran bought 22.3m kg, says Forbes and Walker, a leading broker. Jordan came

second with 19.6m kg. "This improvement is astonishing," says the broker's report. "In the first five months, the total shipment was only 8m." Jordan purchased a mere 3.3m kg in the first eight months of 1990. Tea traders argue that this "spectacular rise" could have only one explanation. Jordan has been buying tea for Iraq after the United Nations trade embargo, said a Sri Lankan agent for a Cairo-based firm. In the first eight months of 1991, Egypt came third.

Tea production rose sharply in July and August and it is possible that last year's record crop of 232.2m kg will be bettered. Forbes and Walker doubt that production will decline in the final quarter. Tea exports, which totalled nearly 139m kg, earned Sri Lanka SR 12.1bn, (about \$300m) in the same period last year, Sri Lankan tea exports earned SR12.8bn.

Although there was "strong Middle-East buying in the first fortnight of October, particu-

larly by agents for Syrian buyers, Iraqi buyers were absent," said Forbes and Walker. The average price of tea of all grades fell by about SR1 per kilo (12.5c). High-grade tea prices fell by about 15.5 per cent.

While the 1990 record production of 232.8kg (two hundred and thirty three point eight kilos) may be bettered, the harvest has been a decline in the harvest of high- and medium-grade teas, which fetch higher prices than the low-grade.

Barbadian sugar problems

By Canute James in Kingston, Jamaica

THE BARBADIAN sugar industry has been temporarily shut down because it has run out of money, and there is a danger that the island will be able to meet its European Community and United States quotas for the current crop year.

Barbados Sugar Industry, a privately-owned company, has closed its three mills, which were being made ready for the start of the harvest in three months time. It owes US\$87.5m to the state-owned Barbados National Bank, has had its

lines of credit cut off. "The company is seeking a foreign loan of \$8m to allow it to reopen the mills in time for the start of the harvest. "Within the last few weeks, the situation began to reach crisis proportions when the industry's major bankers advised that they were not in a position to meet the industry's entire financial requirements," the company said. A delay in the start of milling will threaten shipment of the country's 54,000-tonne EC quota.

MARKET REPORT

THE GOLD price rose sharply at the London bullion market yesterday in a follow-through from Friday night's continued rally in New York. By the close it was quoted at \$364.40 a troy ounce, up \$4.40. Gold was underpinned by comments by former Soviet Prime Minister Nikolai Ryzhkov at the weekend that seemed to endorse recent statements by Soviet economist Grigory Yavlinsky that Moscow holds only 240 tonnes of gold reserves. But traders said trading was fairly thin and suggested that stiff resistance at \$365 an ounce would have to be broken before further significant progress could be made. There were worries,

London Markets

SPOT MARKETS	
Crude oil (per barrel FOB)	+ or -
Dubai	\$19.05-9.10c +0.25
Brent Blend (dated)	\$22.50-0.00
Brent Blend (Dec)	\$22.50-0.00
WTI (1st mt)	\$23.75-0.50c +0.5
Oil products	
(NWS prompt delivery per tonne CIF)	+ or -
Premium Gasoline	\$22.90-0.00
Gas Oil	\$22.50-0.00
Heavy Fuel Oil	\$22.50-0.00
Naphtha	\$22.50-0.00
Petroleum Argemess	\$22.50-0.00
Other	
Gold (per troy oz)	\$364.40 +4.4
Silver (per troy oz)	\$41.00 +2.0
Platinum (per troy oz)	\$371.00 +7.5
Palladium (per troy oz)	\$386.35 +0.80
Copper (US Producer)	\$110.25 -0.3
Lead (US Producer)	\$30.00 -0.5
Tin (Korea Lumpur market)	\$14.80 -0.05
Tin (New York)	\$29.00 -0.10
Zinc (US Prime Western)	\$22.10 -0.2
Cattle (live weight)	\$104.15p +3.2p
Sheep (live weight)	\$112.40p +1.3p
Pigs (live weight)	\$74.82p +2.10p
London daily sugar (raw)	
London daily sugar (white)	\$237.00 -0.3
Tea and Lyle export price	\$246.50 -1.0
Barley (English feed)	\$117.00
Maize (US No. 3 yellow)	\$140.00
Wheat (US Dark Northern)	\$101.00
Rubber (Nov)	\$4.50p
Rubber (Dec)	\$4.50p
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Rubber (Feb)	\$4.50p
Rubber (Mar)	\$4.50p
Rubber (Apr)	\$4.50p
Rubber (May)	\$4.50p
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Rubber (Jan)	\$4.50p
Rubber (Feb)	\$4.50p
Rubber (Mar)	\$4.50p
Rubber (Apr)	\$4.50p
Rubber (May)	\$4.50p
Rubber (Jun)	\$4.50p

LONDON STOCK EXCHANGE

Share prices slide as confidence wilts

By Terry Byland, UK Stock Market Editor

SUSPICIONS that Wall Street may be due for a correction, together with renewed uncertainties over the domestic political and economic outlook, drove UK equities down through the FTSE 2500 mark again yesterday. Selling pressure, moderate at first, gathered pace later when stock futures turned lower and the new session in New York opened with the Dow Average sharply lower.

The FTSE index ended the day 35.4 down at 2,575.7, virtually the lowest point in the day. London put little faith in Wall Street's surge to a new Dow peak on Friday. UK shares opened lower and, brushing off a monetary stimulus to regain the 2,600 mark, 2,600 area gave ground steadily as the session moved

Account Dealing Dates	First Dealing	Oct 14	Oct 22	Nov 11
Open Dealing	Oct 22	Nov 8	Nov 27	
Account Dates	Nov 8	Nov 15	Dec 7	

Notes: Dealing days may include public holidays.

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part for economic optimism. Mid morning brought the latest official data on UK retail sales, with September annualised volume 0.7 per cent down.

Early trading was featured by low trading volume as the pension funds and other big institutions backed away in the face of the generally negative mood in the stock market. It was, however, very difficult for them to sell stock in any size without accepting further discounts than they were prepared to take.

Water and electricity stocks were marked down on the political uncertainty. The gloom on the retail front brought lulls in the high street store groups, although selling was no heavier in this sector than elsewhere in the market. The bid sector traded more

cautiously as dealers awaited a new move in the Ultramar takeover situation. The stock market remained convinced that Ultramar will be taken out, but perhaps not by Lasso and almost certainly at a higher price than Lasso has offered. By the end of the session, the market rounded with suggested names of a counter bidder for Ultramar.

Blue chip stocks were unsettled by London's nervousness regarding Wall Street. Mr Peter Thorne, strategist at Nikko Securities, warned that Wall Street's recent strength "is unlikely to continue" in view of perceived worries about inflation in the US.

Consequently, London was poised for flight when New York opened and the Dow Average swiftly shed 18 points.

London's blue chips quickly reacted, ICI replacing a small gain with a loss and Glaxo, Shell, BP, Reckitt & Coleman and Rank Organisation all set

back lower. The weakness was emphasised by a rapid narrowing in the premium on the FT-SE December futures contract.

Seag volume was moderate at a final total of 367.8m shares compared with 551m on Friday, with Asda nil-paid contributing 40m to yesterday's total. But business increased in the second half of yesterday's session when the slide in share prices also gathered speed. In early trading, when much of the significant institutional business is normally transacted, Seag volume was thin and the 100m share total was, unusually, not reached until after 10.00am.

FINANCIAL TIMES STOCK INDICES

	Oct 21	Oct 20	Oct 19	Oct 18	Oct 17	Oct 16	Oct 15	Oct 14	Oct 13	Oct 12	Oct 11	Oct 10	Oct 9	Oct 8	Oct 7	Oct 6	Oct 5	Oct 4	Oct 3	Oct 2	Oct 1	Sept 30	Sept 29	Sept 28	Sept 27	Sept 26	Sept 25	Sept 24	Sept 23	Sept 22	Sept 21	Sept 20	Sept 19	Sept 18	Sept 17	Sept 16	Sept 15	Sept 14	Sept 13	Sept 12	Sept 11	Sept 10	Sept 9	Sept 8	Sept 7	Sept 6	Sept 5	Sept 4	Sept 3	Sept 2	Sept 1	Aug 31	Aug 30	Aug 29	Aug 28	Aug 27	Aug 26	Aug 25	Aug 24	Aug 23	Aug 22	Aug 21	Aug 20	Aug 19	Aug 18	Aug 17	Aug 16	Aug 15	Aug 14	Aug 13	Aug 12	Aug 11	Aug 10	Aug 9	Aug 8	Aug 7	Aug 6	Aug 5	Aug 4	Aug 3	Aug 2	Aug 1	July 31	July 30	July 29	July 28	July 27	July 26	July 25	July 24	July 23	July 22	July 21	July 20	July 19	July 18	July 17	July 16	July 15	July 14	July 13	July 12	July 11	July 10	July 9	July 8	July 7	July 6	July 5	July 4	July 3	July 2	July 1	June 30	June 29	June 28	June 27	June 26	June 25	June 24	June 23	June 22	June 21	June 20	June 19	June 18	June 17	June 16	June 15	June 14	June 13	June 12	June 11	June 10	June 9	June 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13	February 12	February 11	February 10	February 9	February 8	February 7	February 6	February 5	February 4	February 3	February 2	February 1	January 31	January 30	January 29	January 28	January 27	January 26	January 25	January 24	January 23	January 22	January 21	January 20	January 19	January 18	January 17	January 16	January 15	January 14	January 13	January 12	January 11	January 10	January 9	January 8	January 7	January 6	January 5	January 4	January 3	January 2	January 1	December 31	December 30	December 29	December 28	December 27	December 26	December 25	December 24	December 23	December 22	December 21	December 20	December 19	December 18	December 17	December 16	December 15	December 14	December 13	December 12	December 11	December 10	December 9	December 8	December 7	December 6	December 5	December 4	December 3	December 2	December 1	November 30	November 29	November 28	November 27	November 26	November 25	November 24	November 23	November 22	November 21	November 20	November 19	November 18	November 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18	April 17	April 16	April 15	April 14	April 13	April 12	April 11	April 10	April 9	April 8	April 7	April 6	April 5	April 4	April 3	April 2	April 1	March 31	March 30	March 29	March 28	March 27	March 26	March 25	March 24	March 23	March 22	March 21	March 20	March 19	March 18	March 17	March 16	March 15	March 14	March 13	March 12	March 11	March 10	March 9	March 8	March 7	March 6	March 5	March 4	March 3	March 2	March 1	February 29	February 28	February 27	February 26	February 25	February 24	February 23	February 22	February 21	February 20	February 19	February 18	February 17	February 16	February 15	February 14	February 13	February 12	February 11	February 10	February 9	February 8	February 7	February 6	February 5	February 4	February 3	February 2	February 1	January 31	January 30	January 29	January 28	January 27	January 26	January 25	January 24	January 23	January 22	January 21	January 20	January 19	January 18	January 17	January 16	January 15	January 14	January 13	January 12	January 11	January 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TO US THEY'RE THE SAME SIZE.

What might at first seem rather alarming evidence of defective vision is in fact a guiding principle at ■. Over the years in which we have grown to be one of the world's leading providers of investment capital we have always tried to see the potential for growth in every business with which we have dealings.

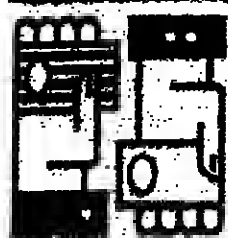
Whatever the size of your company, our philosophy as successful investors in industry remains the same. We are looking for people with drive and ambition and a will to succeed. But at ■ we know that the best way to ensure consistent success is to produce individually tailored solutions to different problems. And as our success is ultimately based on yours, it is in our interest to do our best to help your business grow. This also means we are very happy to give long-term commitment.

And that long-term view is another reason why we think the fish are the same size. In time your minnow could become a big fish and at every stage in this development ■ can provide the capital you need.

As long-term investors in industry, ■ has the experience that can help your business grow. If you don't fancy getting swallowed up why not get in touch with your local ■ office.

PRIVATE BANKING

Tuesday October 22 1991



The sector grew rapidly in the 1980s as lower taxation helped to create more high net worth

Individuals, write David Barchard and Norma Cohen. What impact has the recession had on the net worth of individuals? Have private bankers adapted their strategies?

Go-go days have gone

THE RECESSION of the 1980s has been a sobering experience for the world's wealthy and the bankers who look after their fortunes. Far from the go-go years of the previous decade, which saw an explosion of private wealth, the rich of the 1980s feel they will do well to hang on to what they have.

For these individuals, conservative management has replaced wealth creation as the theme of their private banking needs.

Private banking is the provision of investment banking services for wealthy individuals. While the services offered are no different from those offered elsewhere within commercial banks, it is the packaging and promotion that sets private banking apart.

Thus, while the wealthy will still need to have their resources managed, the pace of growth in private banking is unlikely to continue as it has over the past few years.

Last year private banking was very fashionable. Banks were attracted by a business which was growing at between 10 and 15 per cent a year, was fee driven and resistant to economic downturn. This year we are beginning to see a retrenchment. Some players are being forced to turn back to business areas which offer less long term potential but offer a more immediate and visible return," says Mr Alan Hogg, Head of International Private Banking at Barclays.

In the UK, most - though by no means all - admit they have been hearing cries of distress from some customers as a result of the recession, and other upsets such as growing losses at Lloyd's of London.

"So far we have not seen much real pain at Lloyd's even though more than 9 per cent of its 'runner' bank with us," says Sir David Money-Coutts, chairman of Coutts, but UK private bankers recognise that the worst news from Lloyd's is probably still to come.

Meanwhile, in the US, the recession has forced banks to rethink the uniquely American approach they have taken towards their private banking clients. Banks there have specialised in not simply enhancing wealth, but in helping to create it. This has led to the development of the "highly leveraged individual" - a wealthy individual with substantial loans secured by illiquid holdings such as stock options or commercial real estate.

But the collapse of the US commercial property market and the sharp drop in equities values have forced banks to rethink this approach. US bankers now say that they are refocusing their efforts on more traditional investment products rather than designing new credit products for their private banking customers.

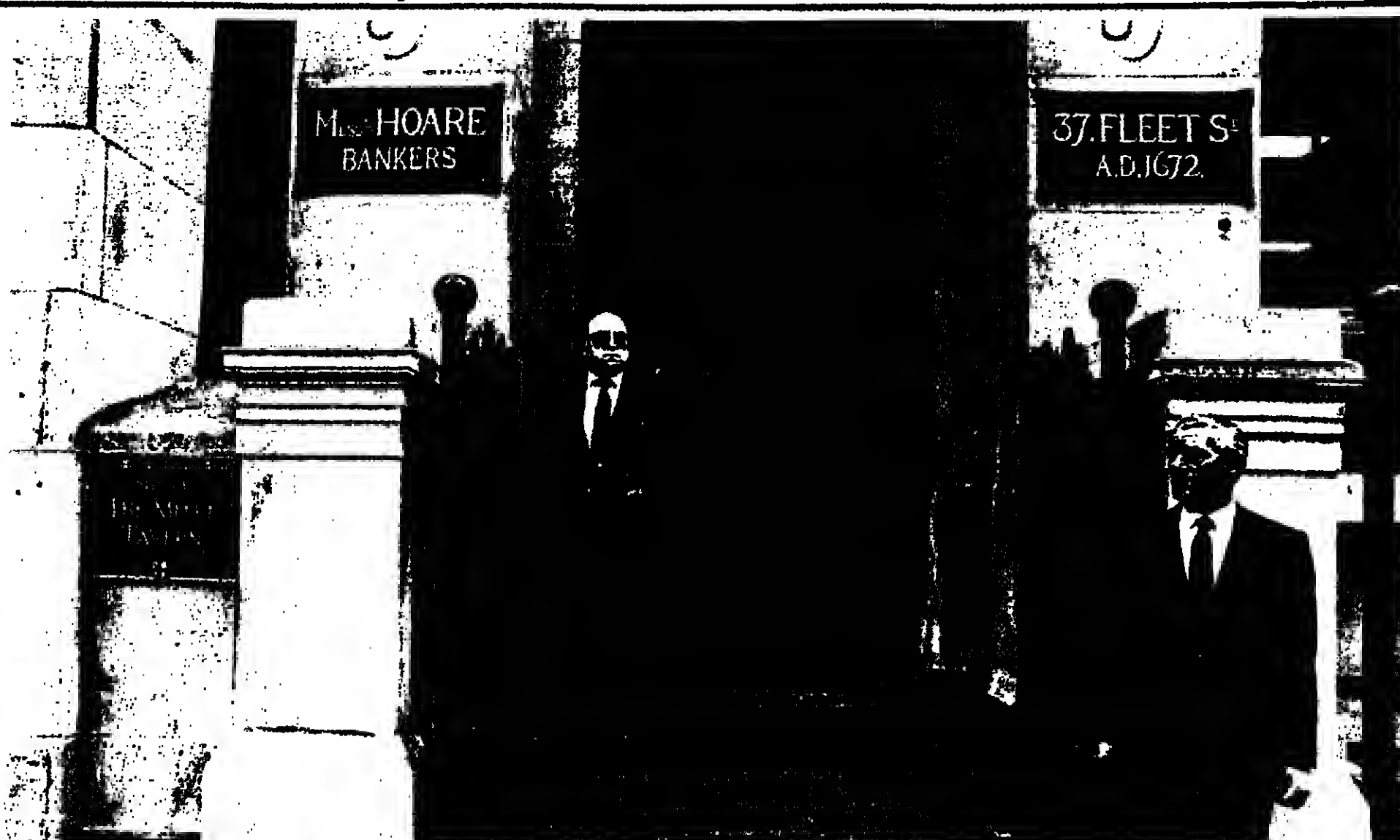
Because the private banking market is precisely that - private - the exact size of the market is difficult to calculate exactly. But Citicorp estimates that some three million individuals worldwide can be classified as very wealthy, and that these have a total of \$7,000bn in assets under management.

But despite the recession,

Aside from the effects of recession, private banking services are being reshaped by a more sophisticated customer base and the increasingly global nature of their investments. Thus, the cost is rising

and its ensuing effect on the portfolios of the wealthy, institutions of all sorts are still lining up to get into the business.

Mr Ian Woodhouse, private banking consultant with Price Waterhouse, said: "Banks, fund management groups and other financial institutions with global expertise, related product expertise and significant distribution networks are lining up to buy traditional private banks that cannot fund the heavy investment and new



So discreet you might never notice. The facade of the building housing bankers G. Hoare has changed little in decades, and gives no clue to the wealth beyond the door

skills needed to compete in the changing environment."

Mr Woodhouse argues that aside from the effects of recession, private banking services are being reshaped by a more sophisticated customer base and the increasingly global nature of their investments. Thus, the cost of providing private banking services is rising, forcing some to reconsider whether they want to be in the business at all.

And, while they have not yet become a formidable force, analysts view the investment trust and mutual fund managers as the next potential source of competition.

The growth of genuinely international private banking has been spurred by the disappearance of exchange controls worldwide. "The volatility of the US dollar in the 1980s for example has encouraged many rich Americans to manage their currency risk by seeking private banking services in London or Switzerland," says one London private banker.

Perhaps this accounts for the surprising fact that come banks report a steady stream of Latin American private client business into London. Until now customers of this kind have generally preferred to stick to the western hemisphere, Miami or New York, and US dollar accounts.

Private banking has also

benefited from the general revolution under way in the banking industry, and the growing tendency to put a price tag on banking services rather than pay for them by cross-subsidising between different types of business. "The more sophisticated customer is more willing to pay for financial advice," says Sir David.

In other words, the personal customer tier of private banking is growing strongly as wealthy individuals seek better services and wider choice of products. This process has extended quite a long way down the ladder. Barclays, the largest UK bank, is offering branch customers with incomes of \$40,000 or more a year a private banking service which is in practice an investment and insurance sales operation to slightly up-market customers.

In the US, Chase Manhattan has taken a similar approach, establishing a tier of "preferred" banking client.

International private banking remains vulnerable to political upsets. The Iraqi invasion of Kuwait followed by the flight of Arab money from the Arabian peninsula to Cairo and London, traditionally safer havens.

Arab customers also began

to appreciate the advantages of off-shore trusts in places like the Channel Islands, which were not subject to the blockading of accounts during the emergency.

The process has helped some private banking operations of high street clearers. "An account with Barclays or Lloyds doesn't attract as much attention as one with a glamorous private banking specialist name," says one banker.

The desire for private banking with strong local roots has helped some new entrants into the market. Adam & Co, a Scottish private bank set up in Edinburgh in 1984, has built up a strong client base in less than a decade, and without the bank office functions that a larger group could provide.

Other new markets may arise in a few years. It looks like being a few years before much private banking is done in eastern Europe or the Soviet Union, but there is a whisper

among some banks that a trickle of substantial private banking customers has started to come out of China. Relationships established now may some day produce rewards.

Traditionally, private banking was small banking business per excellence. Many private bankers today stress the advantages of belonging to a large group which can provide sophisticated treasury products and offer corporate finance to the entrepreneurs among their clients.

But harmonising the skills of the private banker with those of a global banking corporation can be tricky. "You don't want to be too big and reach a point when the name and culture of the bank can be hard to maintain," says Sir David Money-Coutts.

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switching their money so far from home.

One important question for the London market is whether the status of the Channel Islands and Switzerland will change vis-a-vis the European Community, although there is the precedent of Luxembourg, already a member state.

Another more unorthodox question is what action private banking clients should take now against the possibility of a Labour government taking office after the next general election, and introducing policies which are likely to hurt the non-resident, non-domiciled wealthy.

"It figures in almost every conversation we have with our clients at the moment," says one banker.

David Barchard

INSIDE

■ The BCCI scandal: The bank founded as the vision of Aga Khan III wound up in a spiral of fraud. What has this meant for the image of private banking as a whole?

■ International round-up: There is more than just secrecy to make the Grand Duchy attractive, and bankers remain confident in the face of potentially threatening EC moves

■ Luxembourg: There is more than just secrecy to make the Grand Duchy attractive, and bankers remain confident in the face of potentially threatening EC moves

■ Japan: In a society in which more than 90 per cent consider themselves middle class, private banking becomes a mass market business

■ Switzerland: Swiss banks still handle 40 per cent of world business, but the competition is intensifying

■ US: The recession has been sobering for bankers, and they are returning to traditional ways

Leading centres: UNITED KINGDOM

Gloomy talk in London meeting rooms

THE RECESSION in the UK economy has delivered an unexpectedly sharp blow to private banking business in London. In genteel meeting rooms of private banks in London, conversations between clients and account executives this year are haunted by the worries of an economic downturn. Illiquid assets, particularly in the property market, company failures, and the prospect of a possible Labour government.

Account executives are resigned to a year or two in which their clients will want the account to be a wealth preservation rather than wealth enhancement. Clients may have to be shared more than in the past, but this partly reflects their perception that good banking services are more necessary than ever.

"Now is the moment to have a good bank behind you, someone who can bank for both the man and his business. Busy people are still not always getting trustworthy advice," says Marcus Gregson, chief executive private banking at Samuel Montagu, the private banking offshoot of Midland Bank.

While some banks say they have already had clients who have been hit by losses at Lloyd's, others have not. Coutts, with about 9 per cent of Lloyd's "runner," says it has had few difficulties so far. Others even detect a counter-cyclical revival of interest in becoming a name at Lloyd's.

Yet the depression has not blunted the general belief that UK private banking is likely to get better as the 1990s advance.

Apart from the steady long term rise in personal wealth in the UK, many bankers point to the advantages London and the UK offer in private banking. "London is a more natural international private banking centre than New York or Switzerland, for several reasons. It is already a big international banking centre, with a brilliant range of treasury products available.

"In Jersey it has one of the cleanest offshore centres in the world very close at hand. It has

got the infrastructure, it is less expensive than Switzerland, and has a good real estate market. And it is something of a tax haven," says Mr Hap Russell of Citibank's London private banking operation.

But Barclays, the largest UK banking group, which has recently begun expanding its private banking operations, believes a shake-out in the market may not be far away. "We are beginning to see a retrenchment," says Mr Alan Hogg, Head of International Private Banking at Barclays.

'Clients often have no idea how much the stocks and shares they own are worth, and are astonished by the values that come out'

In a business where new customers are usually discovered through personal recommendation, the Big Four clearing banks have the conspicuous advantage of being able to expand private banking business by identifying new private banking customers from their existing branch customer bases.

Clients often have no idea how much the stocks and shares they own are worth, and are astonished by the values that come out," says an account executive at Lloyd's, one of the market leaders in the business.

He cites other reasons why wealthier individuals, with private fortunes of upwards of £100,000, might want to switch from their local branch to the more comfortable, but also far more expensive, sedition of his office. "We can offer the

ability to keep wealth away from local eyes which can lead to a stream of begging letters from local charities - and sometimes worse," he says.

Clients may range from an old lady who has inherited several hundred thousand pounds in liquid assets and is content to live on £12,000 a year, to retired City executives with vast fortunes who want to pay others to look after the millions they have stashed away, while they themselves spend the week fishing.

The entrepreneurial failures and collapses of the late 1980s have generated private banking opportunities as well as corporate finance problems. "You usually find that the entrepreneur involved ends up with at least several hundred thousand which needs managing," says one bank.

In dealing with all these different customers, banks try to build up a strong personal relationship. Business usually goes to the private bank that gets the first telephone call for advice.

At Lloyd's, asset management extends into every financial nook and cranny, as befits a bank noted for its cost-consciousness.

"I always say: 'Don't miss the small opportunities'. We always go for them, unless the client objects," says Wynford Johns, manager of UK private banking at Lloyd's. "These would include a full £10,000 holding of premium bonds, which can be expected to yield small but useful tax free returns every month; a full entitlement of national savings certificates, and a Tessa account."

"Brokers try to flog you things, good advice costs a lot less," says Sir David Money-Coutts, chairman of Coutts & Co.

During the boom years of the 1980s, private banking was very fashionable. The last decade has seen a flow of new entrants to the private banking market. In 1984, Adam & Co set up in Edinburgh, the first new bank in Scotland for 140 years.

Adam has grown strongly and is now believed to have a client base of around 2,000. "We were the best capitalised new bank for a long time," says Mr Ian Dalziel, director.

Eighteen months ago, Midland set up its new UK private banking operation in Samuel

Montagu, which is now believed to account for a fair slice of the £15bn of private banking assets under management with the group. Mr Gregson says Midland is looking for active customers, rather than just wealth-preservers, to whom it can offer Treasury and corporate finance products from the group.

The larger players expect private banking business to grow steadily in the UK throughout the 1990s. A recent study by Price Waterhouse suggested the business is probably set to expand by 10 to 15 per cent a year.

Is it going to be a market place in which small specialists thrive, or one dominated by a few international banks? The UK clearers, perhaps not surprisingly, believe that the future lies with banks able to devote sufficient amounts of capital and human resources to the industry.

In the past, private banking was not a capital-intensive business, but the need to invest heavily in systems may have changed this. Smaller

banks, the argument goes, cannot provide the services a large group does, and they are also more easily blown off course by a few bad decisions. It is not only the large British banks which stand to benefit if this is true.

Normura is already marketing into the UK, offering private banking services out of Switzerland.

The combination of Swiss banking and Japanese performance sounds attractive, but the UK banks believe British customers will hesitate before

Norma Cohen explores how far the forelock tugging will go

Doing the creampuff stuff

attracts and retains customers. The biggest single source of new business at US Trust, she says, is referrals from existing clients.

Tales abound of the lengths to which banks go to keep their private banking clients happy. "The classic is walking the lady's dog while she's on vacation," said Mr Bill Turner, consultant at Price Waterhouse.

Some banks vigorously eschew such client massaging. "We don't do any of that cream-puff stuff," sniffs Mr Jim Somers of NCNB's private bank, who also claims most business comes from referrals. Others concede that highly personalised care is a hallmark of their services.

"There's an art to being able to develop a relationship over time," said Ms Deborah Talbot, head of private banking at Chase Manhattan. In addition to having a wide array of prod-

ucts to offer clients - such as multi-currency custodial accounts - Chase takes particular care, she said, to match clients with a private banker they can feel comfortable with.

Bankers agree that the marketing of private banking services must be more subtle than that of mass banking products. Banks do advertise their services in upmarket publications such as *Forbes* or *Town and Country*, but the advertisements are intended to reinforce brand-name identification rather than to plug any particular service.

At Chase, for instance, private seminars on investing in art are organised with Sothe-

by's. Also, Ms Talbot said, Chase uses its connections to expand business opportunities for its clients. "Let's say a client wanted to expand into Europe. We can provide introductions to the right sort of people for him."

At US Trust, a host of activities are organised specifically to reinforce client loyalty and to help attract new business. According to Mr John Hoyer, executive vice president, the bank organises so-called "family conferences" to which entire wealthy families are invited. One of the families will make a presentation to the group about its investment strategy.

Also, the bank organises seminars, such as inviting the chief genealogist from Tiffany and Co to give a chat, as well as inviting experts on trusts and estates - many of whom do business with the bank - to deliver lectures on the latest

developments. Recently, US Trust has invited its private banking clients to breakfast "chats" with US Cabinet members. US Trust has also sought to tap the captive audience of individuals cruising on the Queen Elizabeth II liner. It has employed an investment professional and a marketing professional to sell back and forth giving lectures.

But the bank, like other private bankers, does more than that. "We recently found a Unitarian minister to marry a client who was here from another country," Ms Grant said. US Trust will do everything from obtaining theatre tickets to delivering cash to children abroad.

Publicly, bankers do not care to dwell too long on the non-financial services they provide for individuals, saying that it is their expertise in the financial arena that clients want most.

PRIVATE BANKING 2

David Lascelles explores the impact of the BCCI exposure

A never-ending spiral of fraud

THE Bank of Credit and Commerce International will become an object lesson in how not to conduct a private banking operation.

The bank, which was shut down for alleged fraud in July, had become a caricature of private banking, taking to extremes the features other private banks like to market as qualities - a full range of services, utmost discretion, and a high level of personal attention. If you were a top-level client of BCCI, its staff would stand by your every need 24 hours a day.

But on the other hand you might also find that your accounts had been purloined to finance BCCI's latest venture. The 20-year-old bank was founded as the vision of Pakistani-born Agha Hasan Abedi to create a "bridge" between the third and first worlds. Much of the bank was geared to perform ostensibly good works, and Mr Abedi was well known for his grand philosophical discourses. But he was also an influence-seeker, and increasingly he harnessed BCCI to his ambitions to create links with powerful people, particularly third world leaders.

BCCI was also born out of a banking tradition in the Indian sub-continent which is vastly different from the west's. Mr Abedi built on the assumption that the bank should take an interest in the families and personal affairs of its clients to

create a "full service" in the fullest sense, extending all the way from the most sophisticated international financial transaction, down to the procurement of sexual services.

BCCI's private banking operations were based on the accounts of exceedingly wealthy individuals from third world countries. They included the ruling families of Gulf sheikhdoms, such as Abu Dhabi (a substantial shareholder in the bank), Dubai, Fujairah and Ajman. There were also prominent Arab businessmen such as Ghazi Pharaon, and Kemal Adham, the former head of Saudi Intelli-

Deposits diverted to plug gaps in BCCI's balance sheet caused by bad lending or by trading losses reached as much as \$1.3bn

gence, and controversial figures like Manuel Noriega of Panama, now being tried for drug trafficking in the US.

But this class of client could also be divided into two groups. The first, which included the Ruler of Abu Dhabi, placed large sums of money with the bank, and used it to perform conventional banking services. A second group, which included Mr

Pharaon and Mr Adham, shared in BCCI's ventures by allowing their names to be used as nominees for BCCI's own investments.

For example, eight of BCCI's largest customers were lent more than \$1.4bn to enable them to buy shares in CCAH, BCCI's illegal banking acquisition in the US. According to Price Waterhouse, which reported on BCCI, these customers were under no obligation to repay the loans, and were effectively fronting for BCCI. Mr Adham was among the largest recipients of CCAH-related loans with \$450m.

But large depositors with BCCI also ran serious risks. Price Waterhouse found that BCCI diverted deposits to plug gaps in its balance sheet caused by bad lending or by trading losses. When the bank's treasury ran amok in the mid-1980s and huge losses had to be concealed, such diversions of deposits reached as much as \$1.3bn.

Some of these were deposits from wealthy clients which were never recorded as having been made. If these depositors sought to withdraw their money, the funds were simply siphoned out of another account, creating a never-ending spiral of fraudulent transactions.

Although BCCI's private banking services were supplied in its own name, they were actually conducted through a Cayman-based affiliate called



BCCI rocked public confidence. Investors and employees in particular were losers - scenes outside the High Court in July say it all

ICIC. The precise nature and ownership of ICIC has yet to be established, but it appears to have been the part of the bank which handled the accounts of the super rich with hundreds of millions of dollars to deposit. Though located in the Caribbean banking haven, it was actually managed from BCCI's headquarters in the City of London.

In the end, of course, all

these people lost huge sums of money when the bank was shut down with losses which have still to be calculated but clearly run into the billions of dollars.

All this, however, took place at the more lurid end of the bank's operations. There was a different and more humdrum aspect to BCCI's private banking business which was more legitimate. The management of

investments and deposits for private individuals took place as normal, and there was also a very active business servicing the accounts of Asian entrepreneurs in Europe - accounts where the personal and business interest ran in close parallel. A large part of this service included letters of credit, international money transfers and tax services.

The big question for the pri-

rate banking business is whether BCCI has damaged its image. In one sense the answer must be yes. There always lurks a suspicion in the public mind that private banking is linked to the furtherance of objectives such as tax evasion, money laundering and fraud. This will have been reinforced by the revelations from BCCI. It also seems likely that banking supervisors will be

taking a much tougher line from now on over private banking transactions which have a questionable air.

On the other hand, it is widely recognised that BCCI is untypical of the banking business in many senses. It would be wrong, therefore, to draw wide inferences. Its dramatic demise may even help to strengthen the sound and legitimate end of the market.

Leading centres: LUXEMBOURG

The Grand Duchy remains confident

bour as a private banking centre may also be indicated by the increase in minimum entry levels for Luxembourg depositors - which have reportedly risen from £100,000

The increase in minimum entry levels have reportedly risen from £100,000 to as much as £500,000

to as much as £500,000 for a full discretionary service.

Part of the reason most of Luxembourg's 180 or so banks are now planning their hopes on private clients is that the syndicated loan business has been somewhat sluggish recently. Latest figures from the Institut Monétaire Luxembourg (IML), the Grand Duchy's banking supervisor, show that overall net profits for Luxembourg's banks slipped from

LFr23.9bn to LFr19.1bn in 1990. Although that was partly the result of higher provisions against loans to the Soviet Union and eastern European countries, slowing Eurobond business was also blamed.

In addition, the flow of banks establishing Luxembourg operations is drying up as the pool of eligible institutions is gradually exhausted. For many in the banking community, however, this is no bad thing. "The aim is not to have a huge number of banks," says Mr Lucien Thiel, general manager of the Luxembourg bankers' association. "Instead of a quantitative increase, we want a qualitative increase."

Bankers are also conscious that Luxembourg may be losing its artificial attractions as a banking centre, at least compared with other centres. Withholding tax on interest income was recently cut in neighbouring Belgium, for example, and

there are rumours that harmonisation of EC banking regulations will put in jeopardy the strict banking secrecy rules which are always cited as one of the Grand Duchy's principal attractions.

There is, however, an increasing perception that it might be better not to stress secrecy as Luxembourg's principal private banking attraction.

"We don't want to attract customers only with these arguments," says Mr Thiel. "We hope that one day we will be able to attract customers without it."

Mr Pierre Jaans, the IML's director-general, goes further, implying that the country's apparent head-start in this

field has been exaggerated. "Luxembourg is very often taken as a showpiece of banking secrecy," he says. "Banking secrecy is good here, but it isn't had in a country like Germany or Belgium."

In short, even if banking secrecy laws are retained - and the Luxembourg government is pledged to defend them - the bankers would like to emphasise other strengths which would be less easy to sweep away with a stroke of the legislator's pen.

■ Know-how. After more than 20 years as a European banking centre, Luxembourg can justly boast of its high level of expertise. The challenge now is to make sure that expertise is properly channelled.

Mr Jaans stresses, for example, that the banks have to improve their productivity and the quality of service on offer to compete with other equally attractive European centres.

Some 805 investment funds were registered by the end of last year, of which 618 qualified as UCITS

■ Product exploitation. Having succeeded in cornering a large part of the Eurobond market, Luxembourg - assisted by the swift legislative action of the Grand Duchy's government - has turned to developing other

financial products aimed at the private client.

In particular, Luxembourg was quick to adopt EC legislation on the clumsily named Undertakings for Collective Investment in Transferable Securities (UCITS) which allowed investment funds to be sold to residents of other EC countries.

According to the IML, some 805 investment funds were registered in the Grand Duchy by the end of last year, of which 618 qualified as UCITS.

■ Other centres which have aggressive and declared ambitions in that field are not making much progress, claims Mr Jaans.

These are the strengths Luxembourg bankers claim will

endure when the bad publicity from the July collapse of BCCI has long evaporated. BCCI registered in the Grand Duchy nearly 20 years ago and the IML, while sympathising with the bank's stricken employees and depositors, says the collapse was the legacy of a more lax supervisory regime which was not unique to Luxembourg and in any case has long since been tightened up.

Certainly there was no apparent rush to withdraw funds from other Luxembourg-registered banks. Indeed, the banking community is convinced that if, in the months and years ahead, there is any "flight to quality" in the world of private banking it will be into rather than out of the Grand Duchy.

As Mr Thiel of the bankers' association puts it: "The volume and the number of small and medium-rich will increase. This business must have a future."

Andrew Hill

Leading markets: JAPAN

A mass market business

THE Industrial Bank of Japan's involvement in recent financial scandals and its extensive loans to a restaurant in Osaka shocked the financial community both within and outside Japan.

In the late 1980s, due to the low cost of capital, margin business with the larger companies became thinner for the Japanese banks. The new strategy was to shift the focus to a lucrative commission and fee business, targeting wealthy individuals.

Eager to make inroads on the market, IBI set up a private banking division in 1988. The bank admits lax screening guidelines led to its involvement in the scandal in which the bank lent up to ¥240bn to Ms Nui Onoue, who faces charges of procuring illegal loans to fund stock market investments.

'They were just unlucky,' says one banker of the scandal-struck IBI

However, most Japanese bankers are sympathetic. "They were just unlucky," says one banker. IBI, Japan's most prestigious bank, had not had the connections or skills to expand into personal banking, yet was under great pressure to do so as other banks rushed to target the retail market.

In spite of the focus on high wealth individuals, private banking in Japan remains quite different from that in the US and Europe, as segmentation of retail banking between wealthy and "ordinary" individuals does not exist.

In a society in which more than 50 per cent of people consider themselves middle class, Japanese banks have approached retail banking by using mass marketing strategies. Foreign bankers compare Japanese banks to supermarkets as opposed to the boutique image of the private banks in the west.

Japanese banks can only offer high net worth individuals the same instruments as "ordinary" clients. The banks try to differentiate services by giving small discounts on fees and commissions, and offering advice on tax.

Private banking had not been recognised until recently in Japan for several reasons. The wealthier individuals have tended to hold their assets in stocks and land, and have few liquid assets. They thus look for ideas on tax avoidance rather than new forms of investments.

Investment instruments a bank can offer are limited due to financial regulation which prevent banks from entering the retailing securities.

Citibank, however, has succeeded in establishing its private banking division in Japan. It is one of the few foreign banks which has chosen to jump into retail banking in Japan, and now has 16 retail branches in the country, where other foreign banks such as Chase Manhattan Bank have made unsuccessful attempts at breaking into the private banking business.

Citibank has managed to attract high net worth individuals - those with about ¥200m in investable assets - frustrated with being treated the same as the "ordinary" customer. Its highly qualified staff have also helped create a glossier image of private banking.

Citibank's private banking division manages assets of around ¥300m to ¥300bn. It has about 2,000 clients, of whom 70 per cent are presidents and owners of small and medium sized companies which have a relatively large cash flow. About 20 per cent are wealthy professionals such as doctors and lawyers.

Mr Yoji Nishihara, vice president of Citibank's private banking division, says the bank does not intend to increase clientele in the private banking division, as tailor-made service would be impossible.

The bank has taken a

long-term view of the private business. Mr Nishihara says clients are not ready to deposit a large chunk of their assets in a foreign bank. The strategy is to develop a relationship by managing and following up cash flow business, such as overseas remittances.

Citibank's strength lies in the large amount of information coming in from its global network. Mr Nishihara says domestic institutions lack the global angle on business, and cannot provide information on overseas investments and tax laws.

Many Japanese banks which entered the private banking business in the late 1980s have been knocking on Citibank's door in order to find out what services the bank is offering. "There have been several requests for interviews from various financial institutions

The sharp increase in the number of high net worth individuals reflects the rise in asset values

including insurance companies," says Mr Nishihara.

The Bank of Tokyo, which recently set up a private banking department, says the number of high net worth individuals has increased sharply, reflecting the rise in asset values and the fact that there is high demand for products.

One problem the personal banking business faces is the loose legal structure, which leaves defining the fine line between tax avoidance and evasion up to the interpretation of tax authorities.

Since private banking services offered by the Japanese banks have tended to centre on advising clients on tax avoidance schemes using legal loopholes, the ambiguity has created problems.

A recent probe by authorities into tax reports of Mr Tadao Yoshida, the president of YKK, the world's largest

maker of zip fasteners, highlighted the legal obscurity and large discretionary power of tax authorities.

The tax agency argued that Mr Yoshida had failed to declare ¥15bn in taxahia income, pointing out that Mr Yoshida's reporting of an investment of 70,000 shares in the privately-held YKK into a related asset management company, Yoshida Kusan, under-valued the shares.

While some contend that Mr Yoshida had simply transferred shares in his own company at a value based on the

assessment for inheritance tax, the incident sent jitters through the financial community.

High profile figures have become wary and are more reluctant to use private banking products. And although a large demand still exists, especially for products involving off-shore investments, some foreign banks which did not want to be identified with the shadier connotations of private banking, have chosen not to enter the market.

Emiko Terazono

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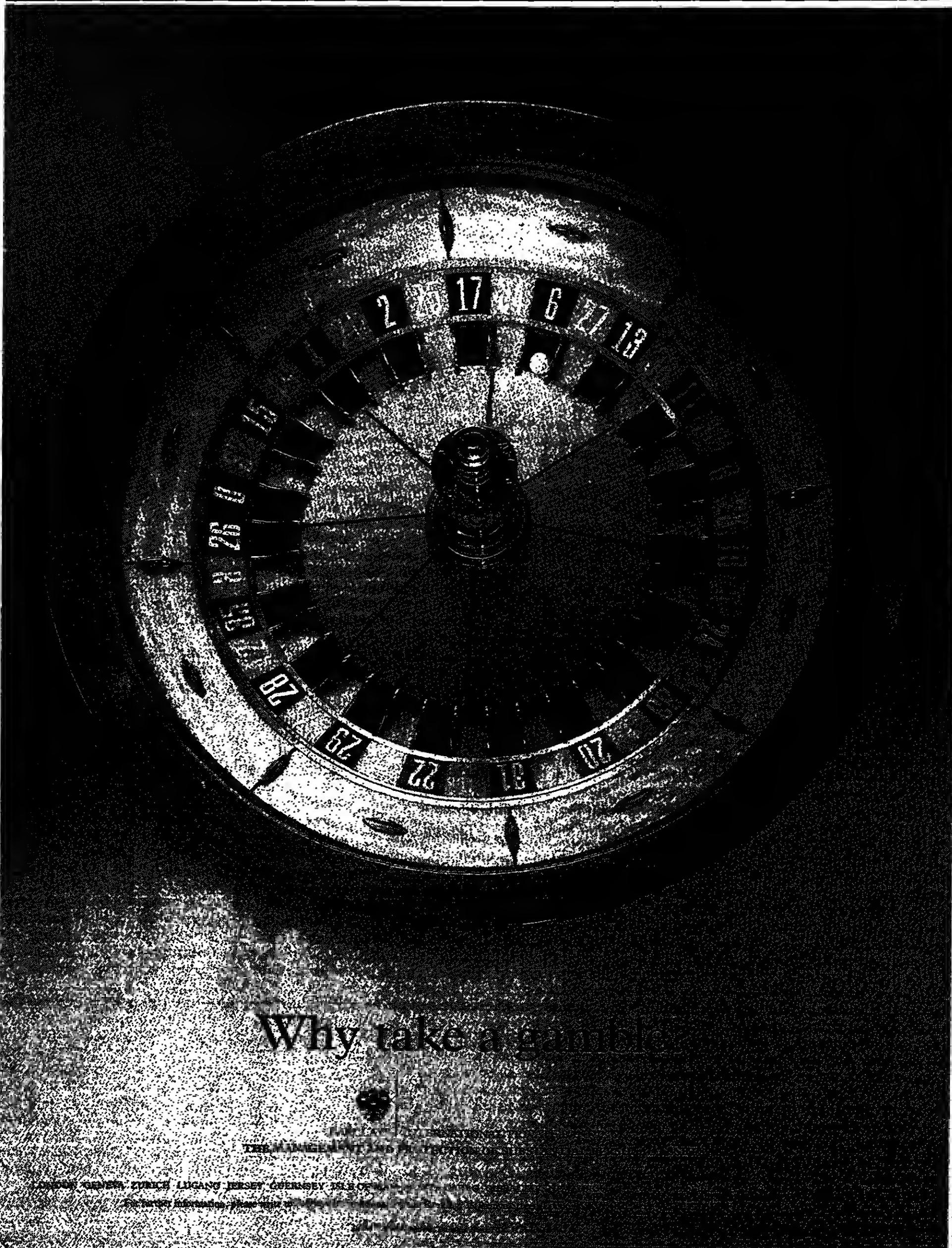
Handwritten signature in Arabic script: محمد بن أحمد

Leading centres: SWITZERLAND

A shift back to traditional ways

Working harder for the slot at the top

William Dufforce



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AMERICANS									
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262	262	262	262	262</					

FINANCE LAND ETC—Contd.

1992		Stock	Price
High	Low		
Australians			
23	23	2000000 Gold	50
23	23	1000000 Gold	10
23	23	500000 Gold	5
23	23	250000 Gold	2.5
23	23	125000 Gold	1.25
23	23	62500 Gold	0.625
23	23	31250 Gold	0.3125
23	23	15625 Gold	0.15625
23	23	7812.5 Gold	0.078125
23	23	3906.25 Gold	0.0390625
23	23	1953.125 Gold	0.01953125
23	23	976.5625 Gold	0.009765625
23	23	488.28125 Gold	0.0048828125
23	23	244.140625 Gold	0.00244140625
23	23	122.0703125 Gold	0.001220703125
23	23	61.03515625 Gold	0.0006103515625
23	23	30.517578125 Gold	0.00030517578125
23	23	15.2587890625 Gold	0.000152587890625
23	23	7.62939453125 Gold	0.0000762939453125
23	23	3.814697265625 Gold	0.00003814697265625
23	23	1.9073486328125 Gold	0.000019073486328125
23	23	0.95367431640625 Gold	0.0000095367431640625
23	23	0.476837158203125 Gold	0.00000476837158203125
23	23	0.2384185791015625 Gold	0.000002384185791015625
23	23	0.11920928955078125 Gold	0.0000011920928955078125
23	23	0.059604644775390625 Gold	0.00000059604644775390625
23	23	0.0298023223876953125 Gold	0.000000298023223876953125
23	23	0.01490116119384765625 Gold	0.0000001490116119384765625
23	23	0.007450580596923828125 Gold	0.00000007450580596923828125
23	23	0.0037252902984619140625 Gold	0.000000037252902984619140625
23	23	0.00186264514923095703125 Gold	0.0000000186264514923095703125
23	23	0.000931322574615478515625 Gold	0.00000000931322574615478515625
23	23	0.0004656612873077392578125 Gold	0.000000004656612873077392578125
23	23	0.00023283064365386962890625 Gold	0.0000000023283064365386962890625
23	23	0.000116415321826934814453125 Gold	0.00000000116415321826934814453125
23	23	0.0000582076609134674072265625 Gold	0.000000000582076609134674072265625
23	23	0.00002910383045673370361328125 Gold	0.0000000002910383045673370361328125
23	23	0.000014551915228366851806640625 Gold	0.00000000014551915228366851806640625
23	23	0.0000072759576141834259033203125 Gold	0.000000000072759576141834259033203125
23	23	0.00000363797880709171295166015625 Gold	0.0000000000363797880709171295166015625
23	23	0.000001818989403545856475830078125 Gold	0.00000000001818989403545856475830078125
23	23	0.0000009094947017729282379150390625 Gold	0.000000000009094947017729282379150390625
23	23	0.00000045474735088646411895751953125 Gold	0.0000000000045474735088646411895751953125
23	23	0.000000227373675443232059478759765625 Gold	0.00000000000227373675443232059478759765625
23	23	0.0000001136868377216160297393798828125 Gold	0.000000000001136868377216160297393798828125
23	23	0.00000005684341886080801486968994140625 Gold	0.0000000000005684341886080801486968994140625
23	23	0.000000028421709430404007434844970703125 Gold	0.00000000000028421709430404007434844970703125
23	23	0.0000000142108547152020037174224853515625 Gold	0.000000000000142108547152020037174224853515625
23	23	0.00000000710542735760100185871124267578125 Gold	0.0000000000000710542735760100185871124267578125
23	23	0.0000000035527136788005009293556213378906	0.000000000000035527136788005009293556213378906
Tins			
23	23	2000000 Tins	20
23	23	1000000 Tins	10
23	23	500000 Tins	5
23	23	250000 Tins	2.5
23	23	125000 Tins	1.25
23	23	62500 Tins	0.625
23	23	31250 Tins	0.3125
23	23	15625 Tins	0.15625
23	23	7812.5 Tins	0.078125
23	23	3906.25 Tins	0.0390625
23	23	1953.125 Tins	0.01953125
23	23	976.5625 Tins	0.009765625
23	23	488.28125 Tins	0.0048828125
23	23	244.140625 Tins	0.00244140625
23	23	122.0703125 Tins	0.001220703125
23	23	61.03515625 Tins	0.0006103515625
23	23	30.517578125 Tins	0.00030517578125
23	23	15.2587890625 Tins	0.000152587890625
23	23	7.62939453125 Tins	0.0000762939453125
23	23	3.814697265625 Tins	0.00003814697265625
23	23	1.9073486328125 Tins	0.000019073486328125
23	23	0.95367431640625 Tins	0.0000095367431640625
23	23	0.476837158203125 Tins	0.00000476837158203125
23	23	0.2384185791015625 Tins	0.000002384185791015625
23	23	0.11920928955078125 Tins	0.0000011920928955078125
23	23	0.059604644775390625 Tins	0.00000059604644775390625
23	23	0.0298023223876953125 Tins	0.000000298023223876953125
23	23	0.01490116119384765625 Tins	0.0000001490116119384765625
23	23	0.007450580596923828125 Tins	0.00000007450580596923828125
23	23	0.0037252902984619140625 Tins	0.000000037252902984619140625
23	23	0.00186264514923095703125 Tins	0.0000000186264514923095703125
23	23	0.000931322574615478515625 Tins	0.00000000931322574615478515625
23	23	0.0004656612873077392578125 Tins	0.000000004656612873077392578125
23	23	0.00023283064365386962890625 Tins	0.0000000023283064365386962890625
23	23	0.000116415321826934814453125 Tins	0.00000000116415321826934814453125
23	23	0.0000582076609134674072265625 Tins	0.000000000582076609134674072265625
23	23	0.00002910383045673370361328125 Tins	0.0000000002910383045673370361328125
23	23	0.000014551915228366851806640625 Tins	0.00000000014551915228366851806640625
23	23	0.0000072759576141834259033203125 Tins	0.000000000072759576141834259033203125
23	23	0.00000363797880709171295166015625 Tins	0.0000000000363797880709171295166015625
23	23	0.000001818989403545856475830078125 Tins	0.00000000001818989403545856475830078125
23	23	0.0000009094947017729282379150390625 Tins	0.000000000009094947017729282379150390625
23	23	0.00000045474735088646411895751953125 Tins	0.0000000000045474735088646411895751953125
23	23	0.000000227373675443232059478759765625 Tins	0.00000000000227373675443232059478759765625
23	23	0.0000001136868377216160297393798828125 Tins	0.000000000001136868377216160297393798828125
23	23	0.00000005684341886080801486968994140625 Tins	0.0000000000005684341886080801486968994140625
23	23	0.000000028421709430404007434844970703125 Tins	0.00000000000028421709430404007434844970703125
23	23	0.0000000142108547152020037174224853515625 Tins	0.000000000000142108547152020037174224853515625
23	23	0.00000000710542735760100185871124267578125 Tins	0.0000000000000710542735760100185871124267578125
23	23	0.0000000035527136788005009293556213378906 Tins	0.000000000000035527136788005009293556213378906
Miscellaneous			
23	23	2000000 Miscellaneous	20
23	23	1000000 Miscellaneous	10
23	23	500000 Miscellaneous	5
23	23	250000 Miscellaneous	2.5
23	23	125000 Miscellaneous	1.25
23	23	62500 Miscellaneous	0.625
23	23	31250 Miscellaneous	0.3125
23	23	15625 Miscellaneous	0.15625
23	23	7812.5 Miscellaneous	0.078125
23	23	3906.25 Miscellaneous	0.0390625
23	23	1953.125 Miscellaneous	0.01953125
23	23	976.5625 Miscellaneous	0.009765625
23	23	488.28125 Miscellaneous	0.0048828125
23	23	244.140625 Miscellaneous	0.00244140625
23	23	122.0703125 Miscellaneous	0.001220703125
23	23	61.03515625 Miscellaneous	0.0006103515625
23	23	30.517578125 Miscellaneous	0.00030517578125
23	23	15.2587890625 Miscellaneous	0.000152587890625
23	23	7.62939453125 Miscellaneous	0.0000762939453125
23	23	3.814697265625 Miscellaneous	0.00003814697265625
23	23	1.9073486328125 Miscellaneous	0.000019073486328125
23	23	0.95367431640625 Miscellaneous	0.0000095367431640625
23	23	0.476837158203125 Miscellaneous	0.00000476837158203125
23	23	0.2384185791015625 Miscellaneous	0.000002384185791015625
23	23	0.11920928955078125 Miscellaneous	0.0000011920928955078125
23	23	0.059604644775390625 Miscellaneous	0.00000059604644775390625
23	23	0.0298023223876953125 Miscellaneous	0.000000298023223876953125
23	23	0.01490116119384765625 Miscellaneous	0.0000001490116119384765625
23	23	0.007450580596923828125 Miscellaneous	0.00000007450580596923828125
23	23	0.0037252902984619140625 Miscellaneous	0.000000037252902984619140625
23	23	0.00186264514923095703125 Miscellaneous	0.0000000186264514923095703125
23	23	0.000931322574615478515625 Miscellaneous	0.00000000931322574615478515625
23	23	0.0004656612873077392578125 Miscellaneous	0.000000004656612873077392578125
23	23	0.00023283064365386962890625 Miscellaneous	0.0000000023283064365386962890625
23	23	0.000116415321826934814453125 Miscellaneous	0.00000000116415321826934814453125
23	23	0.0000582076609134674072265625 Miscellaneous	0.000000000582076609134674072265625
23	23	0.00002910383045673370361328125 Miscellaneous	0.0000000002910383045673370361328125
23	23	0.000014551915228366851806640625 Miscellaneous	0.00000000014551915228366851806640625
23	23	0.0000072759576141834259033203125 Miscellaneous	0.000000000072759576141834259033203125
23	23	0.00000363797880709171295166015625 Miscellaneous	0.0000000000363797880709171295166015625
23	23	0.000001818989403545856475830078125 Miscellaneous	0.00000000001818989403545856475830078125
23	23	0.0000009094947017729282379150390625 Miscellaneous	0.000000000009094947017729282379150390625
23	23	0.00000045474735088646411895751953125 Miscellaneous	0.0000000000045474735088646411895751953125
23	23	0.000000227373675443232059478759765625 Miscellaneous	0.00000000000227373675443232059478759765625
23	23	0.0000001136868377216160297393798828125 Miscellaneous	0.000000000001136868377216160297393798828125
23	23	0.00000005684341886080801486968994140625 Miscellaneous	0.0000000000005684341886080801486968994140625
23	23	0.000000028421709430404007434844970703125 Miscellaneous	0.00000000000028421709430404007434844970703125
23	23	0.0000000142108547152020037174224853515625 Miscellaneous	0.000000000000142108547152020037174224853515625
23	23	0.00000000710542735760100185871124267578125 Miscellaneous	0.0000000000000710542735760100185871124267578125
23	23	0.0000000035527136788005009293556213378906 Miscellaneous	0.000000000000035527136788005009293556213378906

10	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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[illegible]

PLANTATIONS

[illegible]

Eastern Rand

[illegible]

3-month call rate		3-month put rate		3-month call rate		3-month put rate	
20	4.49	20	4.49	20	4.49	20	4.49
25	4.11	25	4.11	25	4.11	25	4.11
30	3.73	30	3.73	30	3.73	30	3.73
35	3.35	35	3.35	35	3.35	35	3.35
40	2.97	40	2.97	40	2.97	40	2.97
45	2.59	45	2.59	45	2.59	45	2.59
50	2.21	50	2.21	50	2.21	50	2.21
55	1.83	55	1.83	55	1.83	55	1.83
60	1.45	60	1.45	60	1.45	60	1.45
65	1.07	65	1.07	65	1.07	65	1.07
70	0.69	70	0.69	70	0.69	70	0.69
75	0.31	75	0.31	75	0.31	75	0.31
80	0.00	80	0.00	80	0.00	80	0.00
85	0.00	85	0.00	85	0.00	85	0.00
90	0.00	90	0.00	90	0.00	90	0.00
95	0.00	95	0.00	95	0.00	95	0.00
100	0.00	100	0.00	100	0.00	100	0.00

Finance

18	32	17	Garlic Res.	
19	32	17	Premier	
20	41	55	Shed	
21	16	21	Turkey Res.	
22	16	33	Ultimate	
23	34	33		
24	34	36		
25	29	38		
26	29	12		
27	29	38		
28	62	38	Mark & Spencer	
29	53	28	Lacoste	
30	53	28	KIT	
31	53	28		
32	34			
33	34			
34	34			
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36	34			
37	34			
38	34			
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100	34			

1. *Chlorophyll a* (Chl *a*)

Left Cam. Bid Offer + or - Yr

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هَكَذَا مِنْ الْأَصْلِ

● Current Unit Trust prices are available on FT Cityline. Calls charged at 48p per minute peak and 38p off peak, inc VAT. To obtain your free Unit Trust Code Booklet ring (071) 925-2128.

● Current Unit Trust prices are available on FT Cityline. Calls charged at 48p per minute peak and 36p off peak, inc VAT. To obtain your free Unit Trust Code Booklet ring (071) 925-2128.

Intl. Energy Inc.	198.4	198.4	212.9	5.25	Central America	\$12.10	19.00
Intl. Ind. Inc.	55.99	55.99	5.62	6.20	South America	97.97	10.71
Japanex	31.27	0.8236	0.8740	0.050	South America	\$11.00	11.65
Intl. American	0.0000	0.0000	0.0000	0.0000			

● Current Unit Trust prices are available on FT Cityline. Calls charged at 45p per minute peak.

(S) (W) (U) (Continued)

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FINANCIAL TIMES
EUROPE'S BUSINESS NEWSPAPER

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

A high-contrast, black and white photograph of a cowboy in silhouette. The cowboy is wearing a wide-brimmed hat and a dark jacket, and is holding a lasso. The background is a bright, textured surface, possibly a wall or a field. The word "Marlboro" is printed in a large, serif font across the top of the image. Above the word, there is a line of small text: "3% DIMEY ACH 12 204 04 8".

Continued on inside back cover

NYSE COMPOSITE PRICES

Stock	High	Low	Open	Close	Change	Volume	Value	High	Low	Open	Close	Change	Volume	Value
NYSE Composite	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000
Dow Jones Industrial	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000
S&P 500	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000
NASDAQ Composite	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000
NYSE Composite	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000
Dow Jones Industrial	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000
S&P 500	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000
NASDAQ Composite	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000	2,111.21	2,108.12	2,110.00	2,108.12	-1.89	1,123,456,789	2,110,000,000

NASDAQ NATIONAL MARKET

3:00 pm prices October 21

Stock	High	Low	Open	Close	Change	Volume	Value	High	Low	Open	Close	Change	Volume	Value
Alcoa	45.12	44.87	45.00	44.87	-0.13	1,123,456,789	45,000,000	45.12	44.87	45.00	44.87	-0.13	1,123,456,789	45,000,000
Amgen	112.34	111.89	112.00	111.89	-0.11	1,123,456,789	112,000,000	112.34	111.89	112.00	111.89	-0.11	1,123,456,789	112,000,000
Boeing	78.90	78.45	78.50	78.45	-0.05	1,123,456,789	78,000,000	78.90	78.45	78.50	78.45	-0.05	1,123,456,789	78,000,000
IBM	156.78	156.33	156.50	156.33	-0.17	1,123,456,789	156,000,000	156.78	156.33	156.50	156.33	-0.17	1,123,456,789	156,000,000
Microsoft	67.89	67.44	67.50	67.44	-0.06	1,123,456,789	67,000,000	67.89	67.44	67.50	67.44	-0.06	1,123,456,789	67,000,000
Oracle	54.32	53.87	54.00	53.87	-0.13	1,123,456,789	54,000,000	54.32	53.87	54.00	53.87	-0.13	1,123,456,789	54,000,000
QinetiQ	12.34	12.19	12.25	12.19	-0.06	1,123,456,789	12,000,000	12.34	12.19	12.25	12.19	-0.06	1,123,456,789	12,000,000
VeriFone	23.45	23.20	23.30	23.20	-0.10	1,123,456,789	23,000,000	23.45	23.20	23.30	23.20	-0.10	1,123,456,789	23,000,000
WorldCom	34.56	34.11	34.25	34.11	-0.14	1,123,456,789	34,000,000	34.56	34.11	34.25	34.11	-0.14	1,123,456,789	34,000,000
Yahoo	15.67	15.42	15.50	15.42	-0.08	1,123,456,789	15,000,000	15.67	15.42	15.50	15.42	-0.08	1,123,456,789	15,000,000
Alcoa	45.12	44.87	45.00	44.87	-0.13	1,123,456,789	45,000,000	45.12	44.87	45.00	44.87	-0.13	1,123,456,789	45,000,000
Amgen	112.34	111.89	112.00	111.89	-0.11	1,123,456,789	112,000,000	112.34	111.89	112.00	111.89	-0.11	1,123,456,789	112,000,000
Boeing	78.90	78.45	78.50	78.45	-0.05	1,123,456,789	78,000,000	78.90	78.45	78.50	78.45	-0.05	1,123,456,789	78,000,000
IBM	156.78	156.33	156.50	156.33	-0.17	1,123,456,789	156,000,000	156.78	156.33	156.50	156.33	-0.17	1,123,456,789	156,000,000
Microsoft	67.89	67.44	67.50	67.44	-0.06	1,123,456,789	67,000,000	67.89	67.44	67.50	67.44	-0.06	1,123,456,789	67,000,000
Oracle	54.32	53.87	54.00	53.87	-0.13	1,123,456,789	54,000,000	54.32	53.87	54.00	53.87	-0.13	1,123,456,789	54,000,000
QinetiQ	12.34	12.19	12.25	12.19	-0.06	1,123,456,789	12,000,000	12.34	12.19	12.25	12.19	-0.06	1,123,456,789	12,000,000
VeriFone	23.45	23.20	23.30	23.20	-0.10	1,123,456,789	23,000,000	23.45	23.20	23.30	23.20	-0.10	1,123,456,789	23,000,000
WorldCom	34.56	34.11	34.25	34.11	-0.14	1,123,456,789	34,000,000	34.56	34.11	34.25	34.11	-0.14	1,123,456,789	34,000,000
Yahoo	15.67	15.42	15.50	15.42	-0.08	1,123,456,789	15,000,000	15.67	15.42	15.50	15.42	-0.08	1,123,456,789	15,000,000

AMEX COMPOSITE PRICES

3:00 pm prices October 21

Stock	High	Low	Open	Close	Change	Volume	Value	High	Low	Open	Close	Change	Volume	Value
AMEX Composite	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000
Dow Jones Industrial	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000
S&P 500	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000
NASDAQ Composite	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000
AMEX Composite	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000
Dow Jones Industrial	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000
S&P 500	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000
NASDAQ Composite	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000	1,111.21	1,108.12	1,110.00	1,108.12	-1.89	1,123,456,789	1,110,000,000

CZECHOSLOVAKIA

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TION III

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Americas

NETWORKING AND OPEN SYSTEMS

SECTION III

Tuesday October 22 1991

The computer industry and its customers have been shaken and confused by the speed of development of the open systems movement. Yet the emergence of industry-wide standards promises a new era of efficient and effective computing, writes Alan Cane

The age of the answer

THE GLOBAL computer industry is in crisis with a majority of companies showing reduced sales and profits. A major cause is the rapid rise of open systems which are forcing down hardware prices. Computer users worldwide are faced with a bewildering choice of computing options and many are holding back from further investment in data processing until the confusion dies down. Again, a major cause is the growth of open systems. It is ironic that open systems are harming computer suppliers and confusing customers; they have been heralded as an important stage in the maturation of the modern computer industry, yet seem to contain the seeds of its destruction. From the customers' point of view, open systems should open the door to a new era in efficient and effective computing. Open systems should give them "freedom of movement" in three key areas: portability, compatibility and scalability. Portability will give them the freedom to move across different computer makes and models. Compatibility will give them the freedom to move easily from one open system to the next as technology

changes. Scalability will enable them to move between systems of different sizes. Mr Geoffrey Morris, president of the international X/Open group which "kitemarks" open systems-compliant products, points to the masses of data trapped in "closed and isolated information ghettos of government and corporate systems around the world. "We have got to get out of those information ghettos and get rid of the constraints. Until now people have been able to ask questions of information systems but they seldom have been able to get the right answers - or even an answer that is close to their question. Tomorrow has got to be the age of the answer." But first the confusion will have to be dealt with. Open systems can be defined in as many ways as there are people prepared to commit themselves to a definition. There are, in addition, geographic variations. In Europe, the term traditionally means computer systems which obey the rules of open systems interconnection (OSI) and so can be easily connected together. In the US, an open system is more likely to be taken as meaning one which uses the Unix operating



system or one of its variants. To all intents and purposes, however, "open" in computing terms simply means obeying agreed industry-wide standards. Virtually every manufacturer of hardware or software now claims to offer open systems. From the customers' point of view, it often seems as if every manufacturer is offering a different open system, and therein lies the confusion. The personal computer operating system MS-DOS is an open system, although one imposed on the industry through the success of the IBM personal computer rather than agreed by industry participants. Some 35,000 computer programs have been written to run under MS-DOS. Nobody could pretend that it has much elegance as operating software, but any software developer writing an application programme to run under MS-DOS knows there is a huge market for his efforts.

The development of the open systems movement occurred in two phases, the first chiefly concerning OSI, a long-drawn-out battle by the world's standards bodies to establish the rules of the game, the second a frantic jockeying among the major computer groups to become associated with whichever version of the Unix operating system will become the world standard. OSI is a set of rules which sets out in detail how computer systems of different manufacture should be connected together if they are to function as part of the same network. Before the world's standards bodies had begun work on OSI, International Business Machines, which has been responsible for imposing more standards on the data processing business than any other manufacturer, had developed its own rules, Systems Network Architecture (SNA) for the interconnection of IBM

systems into networks. Companies wishing to attach their equipment to IBM networks had to obey SNA rules. There was, therefore, powerful pressure, especially from European computer companies, to establish OSI as the world interconnection standard, so depriving IBM of its advantage and "levelling the playing field". The Unix bandwagon developed out of the increasing power and complexity of microprocessor chips, and the need to find an operating system for small and medium-sized companies capable of utilising the power of the new chips while free from the controlling influence of any single manufacturer. The operating system - an internal traffic policeman that controls flows of information through the computer and allocates resources like disc drives - is critical to the kind of software a computer can run. The

leading software developers want to write programs for the widest possible market - in other words, for the most successful operating system. Systems built from standard microprocessor chips and running a standard Unix operating system command inherently smaller gross profit margins than proprietary systems. Even if its installed base is quite small - figures suggest that spending on Unix-based systems may be only 16 per cent of the total hardware investment in the US at present - the presence of low-cost, powerful Unix machines in a manufacturer's catalogue has the effect of depressing the price of proprietary systems. Ms Pauline Swift, a senior consultant with the Pro-gramme Group, argues that as hardware is becoming more marginal to the creation of value in computing, defining how computers are used and not how they are manufac-

ture is becoming a key point for computer vendors. She says computer makers must now compete on utility rather than power; monopolise sources of added value; maximise the sophistication of the value delivered while minimising the sophistication of the technology. In the past few months it has been brought home with increasing force to computer companies that too strict an adherence to standards is a self-limiting strategy. At a certain point, a company cannot be more open than its rivals. This goes a long way to explaining the new spirit of co-operation among the groups vying for leadership in the Unix wars. The industry has polarised around two groups. One, the Open Software Foundation (OSF) including IBM, Hewlett-Packard and Groupe Bull has developed what it calls a distributed computing environment (DCE). Unix International (UI), with more than 140 supporting companies including AT&T and Sun, is committed to a version of Unix called System V Release 4 (SVR4). A few weeks ago, it announced a scheme which it calls UI Atlas. It has three telling points. First, the so-called Unix wars have hurt Unix and the open systems movement by spreading confusion among customers. Therefore, it proposes compatibility between SVR4 and the OSF's DCE. Second, Unix needs to improve security, throughput and its ability to handle live transactions before it can compete fully with proprietary systems. Third and most important, suppliers can get limited value from slavish adherence to open standards. There must be latitude to differentiate themselves one from another if anybody is to make money in the open systems marketplace. The UI Atlas scheme may seem a small development in a world full of warring factions - the ACE consortium including Compaq and the Santa Cruz Operation and the new alliance between IBM and Apple are just two examples. But it does suggest there is light at the end of the Open tunnel both for suppliers and their customers.

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NETWORKING AND OPEN SYSTEMS 2

Progress is at last being made on getting computers to communicate, reports George Black

Popular wave for computing's 'Esperanto'

OPEN

Systems Interconnection, the International Standards Organisation proposed method of getting all makes of computers to communicate, is regarded by cynics as the industry's Esperanto.

They say the idea of a universal language is just a pipe dream. But there have been signs recently that they could eventually be proved wrong.

OSI has been built on a seven-layer model of the data communications world, ratified in 1983 and developed within the committees of the ISO. Experts comment that there are few areas of the model which are still completely blank.

Yankee Group Europe surveyed the European market last year and concluded that there was still a vicious circle created by users waiting for products and suppliers waiting for demand. But nearly half of the largest users had embarked on OSI implementation. Three-quarters of those in the public sector had done so, but in the private sector the trend was a lot more sluggish. Banking and finance firms were the keenest.

Mr Nick Bush, a senior consultant at Butler Cox, likewise sees indications of that vicious circle beginning to be broken. "IBM and Digital now support many of the major OSI standards. The picture is not so

bleak as some have been painting it," he maintains.

Europe was the leader in OSI in the 1980s, with leading manufacturers such as ICL and Bull backing the movement. The European Commission's European Procurement Handbook for Open System (Ephos), one of the prescribed books for prospective suppliers and users, is OSI-based.

OSI is being driven to a great extent by governments. Gossip (the government OSI profile), a simplified version introduced in 1988 by the UK government's central computer and telecommunications agency (CCTA), has been adopted by European governments and become a catalyst for OSI.

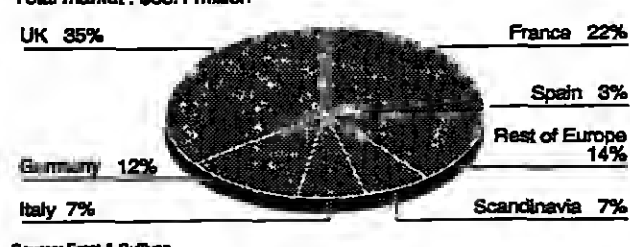
It lays down the open systems conditions which must be met by bidders for public sector contracts. OSI's promoters think that Gossip will soon be endorsed by private companies, too.

The US government adopted Gossip last year, with minor amendments. But in the US there is still much less interest in OSI than in Europe.

In the UK, open systems have been popularised since the mid-1980s by the Department of Trade and Industry. This had a beneficial effect in stimulating the market, but also raised expectations before many OSI

OSI market in Europe - 1989

Total market: \$38.1 million



Source: Frost & Sullivan

options were available. There was an over-reaction of scepticism which needs to be overcome.

Three OSI demonstrator projects are run by the department, at Northampton Health Authority, Aston University and the Automobile Association (the AA). These have had a mixed reception, an official said; those who have seen them have generally concluded that the concept was right but the cost of new equipment, planning, implementation and training was still too high.

The advance of OSI has been delayed by the growing popularity of an easier, ad hoc solution known as TCP/IP (Transmission Control Protocol/Internet Protocol). This is the US Department of Defense's standard for communications

between machines based on Unix open operating systems.

Many users setting up Unix networks have preferred TCP/IP to OSI, though often seeing it as only a temporary solution on the way to OSI.

The DTI still believes that OSI will be the eventual winner, though it concedes the evolution is taking longer than it expected. In the short term, it says, pragmatic solutions such as TCP/IP may be needed, but in the long term OSI should prove more robust and have fuller functionality.

An OSI products guide, published by Technology Appraisals with research funded by the DTI, goes into its second edition shortly; it lists hundreds of products from around 80 suppliers.

The first edition did not sell

as well as hoped; an official said prospective OSI users were still being very cautious. But he thought the barrier was now mainly psychological.

The DTI is to publish an OSI migration guide to complement the products guide. Some top vendors are likely to bring out their own literature to encourage users to make the move.

Each of the three big trading blocks - the US, Europe and the Pacific Basin - now has its own forum or workshop for determining how OSI standards can be implemented and reflecting the content of Gossip.

To the outsider, the world of OSI seems to have so many administrative and advisory bodies that the mechanism appears absurdly complicated and more likely to hinder than help the diplomatic process. Insiders argue that the nature of the subject is just so complicated that this is the only way it can be done.

Progress is being held up by a lack of flesh on some of the bones of the ISO model. This is especially true at the higher levels, affecting the user's applications, such as transaction processing and network management.

Transaction processing has had to wait while other applications such as file transfer and electronic mail, seen as

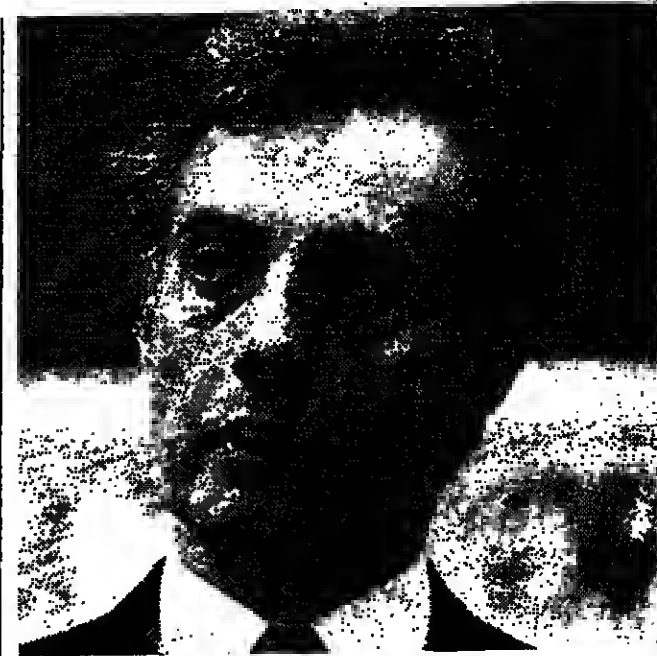
more urgent by users, were being addressed.

The rapid spread of Unix-based systems in the past few years has turned OSI-based transaction processing into one of the users' priorities. The vendors are now scrambling to make such systems work.

As a result of the remaining inadequacies of the OSI model, acceptance of its standards is patchy. X.25 is a well-established OSI standard for packet-switched networks. FTAM (File Transfer Access Mode) has been popular in Europe as a standard for file transfer.

But although users say they want OSI-based electronic mail and network management, they have been slow to take up the options, X.400 and X.500. Nor has MapTop, the Manufacturing Automation Protocol/Technical and Office Protocol, advanced as quickly as its advocates supposed it would.

OSI products vendors are having to be patient and find other sources of income while the market emerges. Dowry Communications has been marketing a range of OSI hardware and software products for around four years now. Mr Chris Anderson, its marketing manager, says that up to now there has been more interest in its TCP/IP range than in OSI.



Mr Geoffrey Morris, president and chief executive of X/Open, a consortium of computer suppliers and customers which aims to create a common applications environment (CAE) based on the most useful formal and de facto standards. "Tomorrow has got to be the age of the answer," he says.

Systems Network Architecture

Pressure on IBM grows

WHEN IBM moved its networking systems headquarters from the US to the UK this year, it recognised the paramount importance of the issue to its biggest European customers.

Networking is at the top of their agenda, as the single European market approaches and the eastern half of the continent becomes accessible. About 40,000 of IBM's users worldwide rely on Systems Network Architecture (SNA), its proprietary method of connecting computers.

SNA was introduced in 1974, originally to handle the need for a single terminal to address several applications. Before long, standardisation was being demanded as users wanted to link equipment from various vendors.

In 1982 IBM began to respond by opening up SNA. In 1986, when it launched Open Communications Architecture and published details of the SNA interfaces, IBM allowed other manufacturers to connect to its machines.

The primary need among the largest IBM users at that time was to be able to manage

Rome OSI laboratories.

IBM has substantially increased its investment in OSI since 1986, when it announced its OSI Communications subsystem to let its users communicate with non-IBM machines through OSI protocols. But Mr Anderson believes that SNA, OSI and TCP/IP will coexist for the foreseeable future.

At present, SNA is the best choice for the mission-critical applications of major users, with the closest set of software to support it, he says. Many of the world's largest organisations - banks, manufacturers, public bodies - would grind to a halt if their SNA system failed.

In the US, SNA certainly still enjoys users' confidence, partly because of greater loyalty to IBM than exists in Europe and partly because of fundamental differences in the markets.

Some users, however, mainly in Europe, have been pressing IBM to move faster towards OSI. These users typically want less focus on the IBM mainframe and want to adopt some OSI standards, such as X.25 for connecting equipment to packet-switched data networks.

IBM has sought to reassure this pressure group. Last year it made a strong endorsement of the Gossip (Government OSI Profile) protocols which are essential to bidders for public sector contracts.

In September it made a set of announcements of products and intentions for networks, including clarification of its Systems Application Architecture (SAA) framework and within SAA its SystemView strategy covering SNA and OSI.

The announcements focused on its NetView product, which enables users to view and control their multi-vendor networks from a single workstation. In promoting NetView, IBM is playing to its SNA strengths, as users generally see SNA as much superior to OSI in network management.

Mr Dave O'Brien, UK managing director of Candler, a software house which is a member of IBM's new System

In promoting NetView, IBM is playing to its SNA strengths, as users see it as superior to OSI in network management.

View International Alliance, says that all the vendors have underestimated the effort needed to make OSI work.

In setting up the alliance, IBM was acknowledging that it needed help on both SNA and OSI, he adds. IBM will work through "design councils", an inner circle of systems software specialists, to try to sort out the troubles of multi-vendor sites.

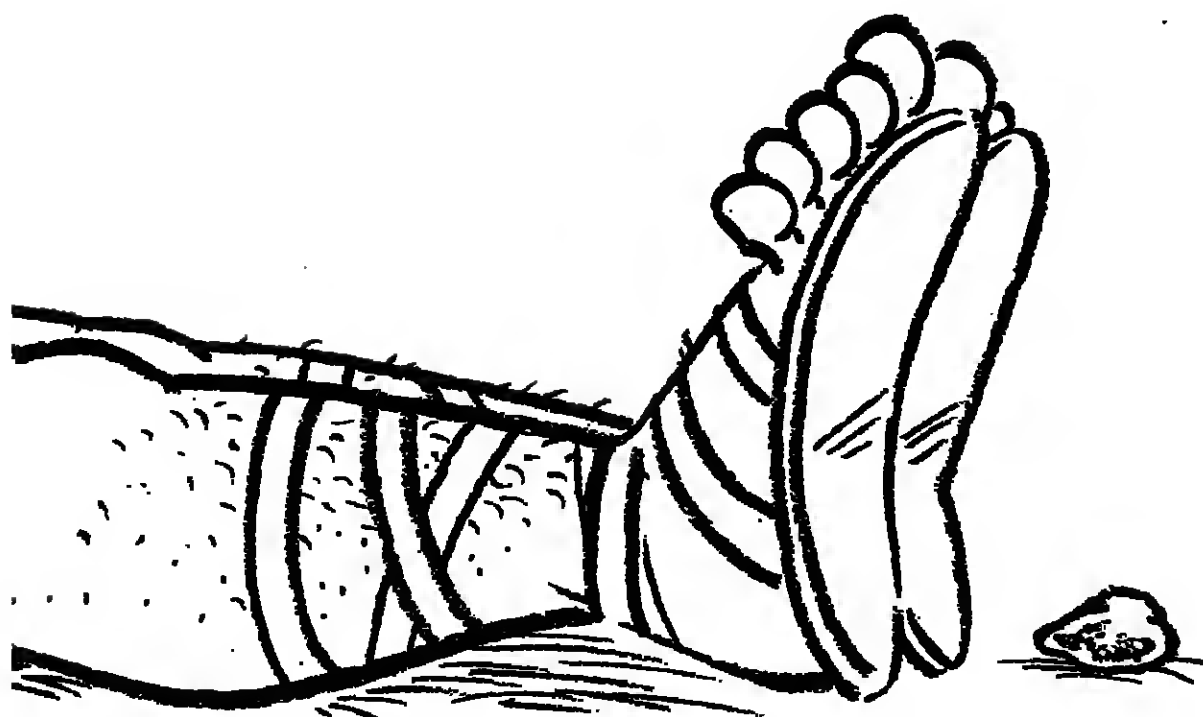
Mr David Williamson, managing director of IMI Computing, which serves many IBM users, says that IBM is coming under increasing pressure to move faster towards OSI, especially as a result of the growing success of the Unix-based RS/6000 mid-range machines.

SNA stood in the way of users wanting to achieve hardware independence, he said, but IBM was listening to its customers and had now recognised the strength of feeling for open systems.

SNA will continue to have a wider range of supporting products than OSI for a number of years. That can change when IBM wants it to. SNA's share of the networks market will probably fall slowly through the 1990s, as OSI matures and as users downgrade to smaller machines.

Nevertheless, any thoughts of its demise "are certainly premature," says Mr Williamson.

George Black



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NETWORKING AND OPEN SYSTEMS 3

'Proprietary systems are not a scenario for survival any more'

Digital opens up its Decnet network

DIGITAL promised to move its Decnet proprietary network to an open systems environment about two years ago and finally delivered the goods this summer.

Mr Keith Baker, the company's open networks marketing manager, admits it is around a year later than had been hoped, but says it was thought more important to ensure that the product did everything required than to meet a target date for completion.

Decnet now supports both the International Standards Organisation's Open Systems Interconnection (OSI) and the US Department of Defense's TCP/IP (Transmission Control Protocol/Internet Protocol).

The scope of the system has helped to dispel some of the cynicism that tends to accumulate in the computer industry.

The market grew so fast that it became hard for even the leaders to keep up

whenever announced products do not materialise on time.

Digital Networking Architecture, as Decnet was originally called, is now installed in an estimated 100,000 sites worldwide, amounting to some 4.5m end-users.

It began life in 1975 - soon after IBM's Systems Network Architecture (SNA) - in similarly humble circumstances. Having first been developed by the company for its own use to link its PDP-11 minicomputers

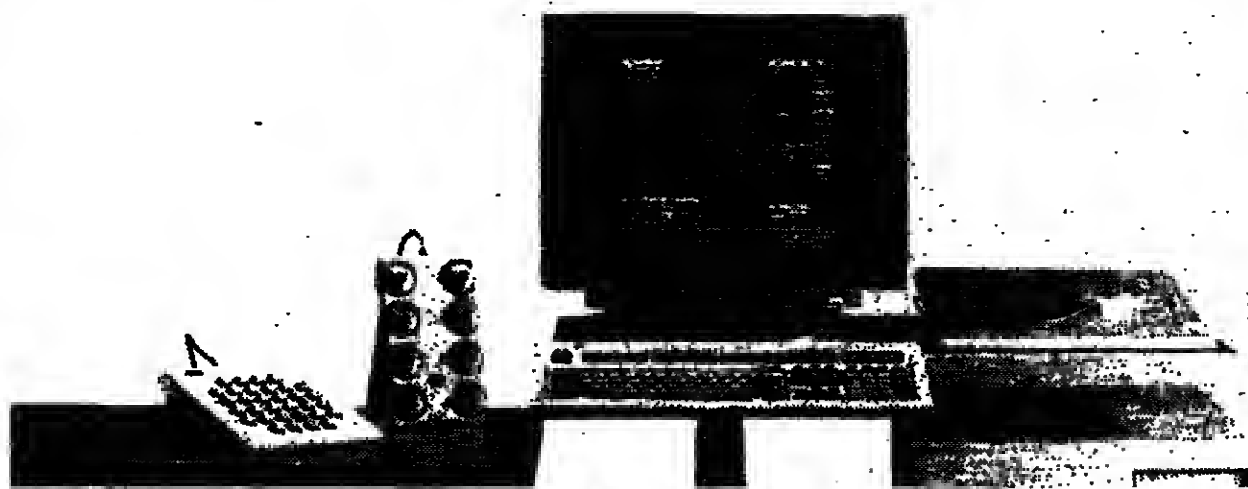
and other proprietary equipment, the Decnet Phase I product was unsophisticated, handling only file transfers within small networks.

The 1978, Phase II version replaced file copying by remote access to files and a basic form of network management. By 1980, when Phase III was introduced, local area networking had been expanded to wide area networking with communications across the public phone system.

As users began to look for the communications between various makes of machine, Digital responded in 1982 with a Phase IV Decnet, incorporating Xerox's Ethernet standards and limited compatibility with IBM's SNA.

Between Decnet Phases IV and V there was a much longer gap, eventually amounting to nine years. This was mainly because the market grew so fast and became so complicated by the number of new vendors, products and standards that it became hard for even the leaders to keep up with all the changes.

This complexity drove Digital to develop a new system, OSI. In 1989 it announced a programme for achieving full OSI compliance, hoping to carry it out in six to nine months.



The IBM Risc System/6000 Powerstation 730 demonstrating Catia

"Standards hit up against the real world," says Mr Baker.

In particular, the design of the new system had to be changed to take account of the unexpectedly rising demand for TCP/IP.

As late as 1989, Digital was still doubtful about the future of Unix and believed that its appeal might be limited to certain sectors such as universities. Its support for TCP/IP, which serves Unix users, was therefore correspondingly

restricted.

When Digital became aware that the Unix bandwagon was at last rolling, major changes to Decnet Phase V became necessary.

Whereas Unix has become universally accepted in the past couple of years, the same is not true of OSI, Mr Baker notes. The take-up of OSI has been slower than was foreseen both because vendors have had trouble in creating the products and because users have

found the transition harder to undertake than they anticipated.

"They recognise that they must move to OSI, but the problem is how," says Mr Baker.

Meanwhile, Decnet has now reached almost its ultimate stage of development, in his view. "The kitbag of standards is now almost full, unless this is invalidated by some completely new technology," he says.

Opinion is still divided on how wholehearted Digital's conversion to open systems is. Many in the industry believe it is more willing than IBM to drop its proprietary products in favour of those open ones now wanted by a fast-growing number of users.

On the surface, its switch from a proprietary to an OSI-compliant Decnet, as from proprietary operating systems to accommodating Unix, indicates a desire to move as rapidly as

possible to the brave new open world.

This would imply a recognition that Decnet, despite its huge user base, was not a strong enough *de facto* standard to withstand the stampede to open systems; but that, hitherto to OSI, it could become a force comparable to IBM's SNA.

There is certainly evidence to justify this interpretation. Digital has some 200 software houses helping with its Network Application Support (NAS), its equivalent of IBM's Systems Application Architecture (SAA) framework. Many of these are said to be engaged on OSI work.

The company has been proactive in developing the layers of the model where needed, for instance contributing to X.500, the network management standard which is generally thought a weak spot in OSI.

It has also joined the Office Document Architecture (ODA) consortium, which is trying to develop the OSI standard for document exchange between different systems.

However, Mr Audrey Mandela, research director of consultancy Yankee Group Europe, suggests that although Digital's direction is clear, its speed of movement may not be as

fast as users want. It could be delayed until full value has been extracted from some of its proprietary products, she thinks.

Software houses report a favourable reaction to Decnet Phase V. Mr Neil Proctor, a sales support manager at Hoskyns, says that users now feel Digital is committed to open systems, even though it may take time to turn its organisation around.

Mr Phil Brobyn, a technical consultant at Fraser Williams, says the enhancements will be welcomed, though at present users are asking for the TCP/IP features more than those for OSI.

The important question for Digital now is whether its users will bail out at the time and cost needed to take up OSI.

This year the company began a project for licensing

The question is: will users bail out at the time and cost needed to take up OSI?

Decnet. Potential clients are either Unix or proprietary systems vendors seeking to help their clients connect to Digital equipment, among the first licensees to be announced is Olivetti.

Digital's Mr Baker believes there will be considerable interest in acquiring such licences "because proprietary systems are not a scenario for survival any more."

George Black

THE US INITIATIVE

Protocol that should survive

TRANSMITTING DATA from computer to computer requires agreed standards, referred to as protocols. Communications protocols lurk in the depths of computer hardware, and by their very nature the end-user should not need to address them directly.

To tackle the order of battle in the protocol war, you must first brace yourself for a barrage of initials. But it does help to understand that protocols are governed by the same rules as the rest of the IT industry: namely, that scientific measurements are hard or impossible to come by, and behind every technical observation lurks a good old-fashioned personal opinion.

In 1973 the US Defense Advanced Research Projects Agency (Darpa) launched a plan to beef up computer links between research establishments and universities across the US. Darpa enjoys a mixed reputation among the US scientific community. Riding high on the defence spending boom of the 1980s it dedicated millions of dollars to the Darpa-car, a six-legged anthropomorphic jeep of latticed steel that jogged around the Darpa parking lot to no great end and broke down frequently.

With computer communications Darpa was on firmer ground. It had already established the Internet computer network in the mid-1970s. Pentagon funding and a heavy political hand across US technology R&D ensured that Darpa's vision of communications protocols prevailed. By 1983 the vast US academic computing community had adopted Darpa's Transport Control Protocol/Internet Protocol (TCP/IP) wholesale.

Darpa sponsorship accelerated TCP/IP through the standards bureaucracy. This formidable backing enabled the TCP/IP community to arrive at a definite version. Settling in on US campus, TCP/IP became inextricably linked with the Unix operating system. As Unix shed its laboratory coat image and entered the commercial arena, TCP/IP arrived in its wake.

Manufacturers Unisys and Hewlett-Packard wrote TCP/IP links into their hardware and software offerings. And with a huge worldwide user base the protocol acquired a loyal following. These standard bearers can be relied upon to rally around TCP/IP whenever Open Systems Interconnection (OSI), the EC-endorsed international protocol, rears its head.

"TCP/IP is efficient and pervasive and most vendors support it. Anybody who uses OSI today is really only doing so because of government constraints. OSI itself is staggeringly complex," says Mr Cliff Wilson, a telecoms executive at management consultants EPMG. Its internal network employs TCP/IP to keep Macintosh and IBM PCs and Digital Equipment and Prime minicomputers in constant communication. He says that TCP/IP is cheaper than OSI by a factor of three to one.

It is a good, straightforward common denominator between disparate computer systems according to Mr Wilson. Unfortunately, this is exactly what people say about OSI. Mr Dermot Dwyer, of the National Computing Centre's open systems group, talks of horses for courses. "What makes TCP/IP worthwhile is what runs

over it. The Simple Mail Transport Protocol (SMTP) is a perfectly good electronic mail system for a Unix environment."

Mr Dwyer does not accept that all TCP/IP based systems are instantly compatible. He thinks that political support should make OSI's triumph inevitable. The government's Central Computing and Telecommunications Authority (CCTA) has just issued a four-stage guide for public sector computer sites shifting from TCP/IP to OSI. The migration is intended to be a painless exercise that installs full OSI compliance by 1993.

The two cost centres for transition are the purchase of OSI communications software (not too steep) and the inevitable consultants' fees (systems consultants will make a tidy sum).

The CCTA can exert pressure on public sector computing. But there is no pressing influence on commercial users. TCP/IP does not demand rare and expensive skills as its academic foundation guarantees a regular supply of experienced graduates. Sun Microsystems has enjoyed phenomenal worldwide sales with its range of Unix workstations. Local networks of Sun machines are governed by the Network File System (NFS). This is a piece of software sold by Sun but written around TCP/IP. Sun users are not about to convert to OSI en masse.

"There is a lot of interest in OSI, but they're not rushing out to buy it," says Mr Jonathan Mills, Sun's UK desktop product marketing manager. "TCP does all the work they need doing at the moment."

Mr Mark Hollister, network marketing manager for Hewlett-Packard in the UK, says his company has long had an association with TCP/IP because "it is practical and a relatively simple way of controlling and monitoring information from different devices."

These benefits may come to be appreciated by beleaguered motorists on the M25. As part of a 655m Department of Transport scheme to provide more information on traffic conditions, police control offices for the motorway are being linked to electronic road signs via a Hewlett-Packard computer roadwork. Two lines of text will be flashed up on digital displays, giving data on alternative "A" road routes for drivers facing queues. After all the official backing for OSI, this high-profile state sector project is relying on TCP/IP signalling.

Mr Paul Negus, a DoT consultant from systems house IPL, explains that by choosing TCP/IP the DoT kept its future options open. "It's a protocol for any machine on the market." The DoT is not bound to stay with Hewlett-Packard, and this flexibility is what the open systems debate is all about.

If government standards cannot override the technical judgment of the DoT, then TCP/IP is guaranteed a long lease of life. The list of OSI programmes and tools will grow, rendering that protocol attractive. Bridges between OSI and TCP/IP will develop. Depending on your allegiances, this entails OSI either embracing or absorbing TCP/IP. The experience of hardware suppliers and the loyalty of its fans suggests that the protocol from Darpa will be around for a long time to come.

Michael Dempsey

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NETWORKING AND OPEN SYSTEMS 4

Louise Kehoe looks at software standards

Truce to boost sales ends Unix wars

THREE years after the industry erupted in battles over software standards for open systems, computer makers remain deeply divided, but hostilities have been suspended. Rival groups supporting alternative versions of the Unix operating system are stressing the similarity of their efforts, rather than squabbling over differences.

Slowing sales growth in most markets has forced computer manufacturers to refocus their energies on efforts to boost sales. In the process, the industry has recognised that users are tired of the industry infighting, which has created widespread confusion rather than making it easier to hook different types of computers together.

"There is no question that perceived or real problems over different approaches to open systems have stalled sales," acknowledges Mr Peter Cunningham, president and chief executive of Unix International, an industry standards group formed three years ago by AT&T and Sun Microsystems which now has 245 members.

The key word now is "harmonisation", Mr Cunningham maintains. The unification of multiple conflicting approaches to open systems is

essential if the open systems movement is to continue its momentum, and "take out" proprietary systems, he says.

It appears highly unlikely, however, that computer makers will ever settle on a single standard version of Unix, the AT&T operating system that has been at the centre of the industry squabbles.

Unix International has endorsed AT&T's latest version of Unix, called Unix System V Release 4, while the rival Open Software Foundation, the founder members of which include International Business Machines, Digital Equipment and Hewlett-Packard, last year launched its own version of Unix, called OSF/1.

In spite of this schism, significant progress is being made toward creating standards that will enable different types of computers to work together efficiently and share applications software. In a landmark event for the open systems movement, OSF recently announced availability of its

Distributed Computing Environment, a new layer of system software that enables different types of computers running different operating systems, including proprietary software, to inter-operate.

"DCE will preserve existing investments in computer hardware, software and networks, and make future product and technology purchases more valuable," says Mr David Tory, OSF president and chief executive.

DCE is a layer of software that resides between a computer's operating system and the application program. It is not dependent on any one operating system, and enables applications to be segmented and run on whichever part of the networked system is best suited to the task.

In a significant step toward creating true industry-wide standards, OSF has agreed to license its DCE to Unix International.

DCE has also received the endorsements of big computer

users including the European Commission and Japan's Nippon Telegraph and Telephone. "DCE is the common technology denominator between industry standards groups," says Mr Tory of OSF.

Unix International is also moving forward. Recently the group announced plans to develop a framework of specifications

on top of Unix if open systems were to continue to grow and knock out proprietary systems," explains Mr Peter Cunningham, of Unix International. By defining "reference technologies" and developing standard interfaces to link them, UI will specify how a broad range of computer products can be incorporated into an open system environment.

By outlining its plans, Unix is attempting to resolve disputes over competing "standards" that have split the computer industry into duelling factions in the past three years.

for open systems, which it calls "UI-Atlas". The Atlas expands the scope of open systems software far beyond the Unix operating system to encompass a broad set of system functions ranging from transaction processing to systems management and the graphical user interface.

"UI members recognised it was essential to build function-

ment, while leaving it up to computer manufacturers and software developers to create competing yet compatible products.

This will enable computer users to choose from a wide range of hardware and software products that they can be sure will mix and match in multi-vendor information systems.

Addressing a fundamental concern among computer manufacturers, UI plans to define interface specifications that give competing companies scope to design their own implementations of open systems, and differentiate them from those of competitors in the open systems market, thus avoiding the "commoditisation" of their products. By outlining its plans, UI is also attempting to resolve some of the disputes over competing "standards" that have split the computer industry into duelling factions over the past three years.

The industry group has endorsed a set of "reference technologies" that will form the basis of its UI Atlas framework. These will become available over the next two to three years and will include technologies developed by several UI members and non-members that cover all aspects of interoperability and application portability.

In a shift of emphasis that

resolves one of the wide differences of opinion over open systems, UI has also acknowledged that existing proprietary system software technologies must be integrated with open systems to protect the value of the vast installed base of proprietary systems.

For all of the excitement generated by open systems, computers running variants of the Unix operating system still account for only about 18 per cent of the world computer market.

Momentum behind the trend toward open systems is, however, growing. IBM, long viewed as the fortress of proprietary systems, recently announced plans to offer AIX, an OSF compliant version of Unix, on its largest mainframe computers. The industry giant has declared its intention to become a "leader in open systems".

Other converts to open systems include Digital Equipment, which is placing increased emphasis on soft-

ware standards; and Unisys, which bases its product strategy on the open concept.

Hewlett-Packard has made a broad commitment to Unix and open systems, while Data General has created a line of open systems products with which it aims to restore itself to financial health.

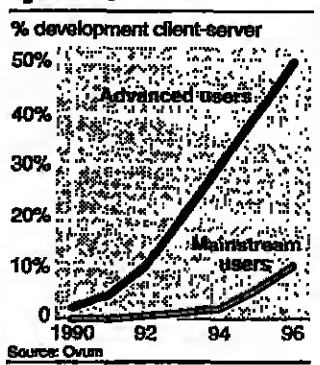
NCR, recently acquired by AT&T, is also a leading open systems advocate along with Sun Microsystems, the workstation market leader. Even Apple Computer, a company built on the superiority of its proprietary systems, has bowed to the inevitable. Through its recently signed agreements with IBM, Apple will adopt a version of Unix and attempt to transform its popular graphical user interface into an industry standard by licensing it to other computer makers.

Indeed, the computer company that lacks an open systems strategy is today the exception, rather than the rule. "The Unix wars" may be over, but new standard battles will inevitably arise as more companies crowd into the open systems arena and struggle to find the best solutions to the complex problems of making networks of heterogeneous computers behave like homogeneous systems.

CLIENT-SERVER COMPUTING

The promise of paradise

Uptake of client-server systems



End-user fourth generation languages (4GLs) on mainframes helped to reduce the programming backlog, and they eased the delivery of applications to impatient end-users. But 4GLs remained largely the province of computer programmers, and were

found by many end-users to be too unwieldy, too unsympathetic to novices, often requiring extensive training and familiarisation.

On the other hand, they kept the user within the corporate fold: the data that users handled was up-to-date, valid and strictly controlled by the data processing department in its role as guardian of the corporate information store.

The PC offered independence to such users at what seemed a low price. Spreadsheet tools such as Lotus 1-2-3 offered ease of use, accessibility and a highly personal base of data. Specific PC database tools, such as dBase, Foxpro, Clipper, and others took the principle further.

Users were able to build up a highly personal collection of data, some of it copied and augmented from corporate records held elsewhere. The PC or workstation has a user-

friendly face, often with "windows" and simple graphics tools.

But there are disadvantages in PCs which the client-server approach could overcome. Mr Robin Bloor, of consultancy Butler Bloor, sees the PC as a personal tool with not enough processing power to cope with all the demands made upon it.

"The PC starts as an enabler, then becomes a constraint, the main problem being one of fragmentation," he says. "But soon people will start producing tools to manage software for the whole network, so that they can build corporate bridges. Only then will it be possible to build your applications on a PC without sacrificing performance."

The evolution of GUIS - Graphical User Interfaces - brings another vital element to the appeal of the client-server solution, since GUIs provide a very friendly environment, and

a "gateway" to other processes. GUIs are part of the movement towards a more liberal environment one demanded by users.

"We've trained something in the region of 3,500 people this year, about 1,500 of them on PC databases, using various PC hosts," says Mr Brian Webb, business development manager of Surrey-based training specialist Compex.

The catch is that little has been written with client-server architecture in mind

"We've detected a shift to the windows-based graphical representation of data. The interface must be intuitive, self-explanatory from the moment the user switches on: that is all part of the 'power to the people' movement, towards seeing all data as a corporate

resource."

Client-server computing proposes a solution so simple that one is tempted to ask why it has not happened before, and just what is the catch? Ideally, the client-server hangs all computing resources together in a network which embraces PCs, mainframes and other resources.

The processing tasks are parcelled out as and where appropriate, taking place locally on the desktop "client", or centrally on the "server". Servers can be dedicated PCs, minicomputers or mainframes. The allocation of tasks takes place invisibly to the user, who sees only the face of the "client" application, almost always a GUI.

The catch is that little software has been written with client-server architecture in mind. PC database suppliers are among the first to take advantage of SQL, the *lingua franca* of database, to link their PC tools to their big brothers on the mainframe such as IBM's DB2. Little other applications software exists.

Mr Frank Dodge is the founder and former president of mainframe accounting software vendor McCormack and

Dodge, (now Dun & Bradstreet Software). His newly formed Dodge Group intends to provide accounting applications on what he calls co-operative processing environment. "The term client-server has been abused, and is getting muddled like other software terms. We are light years away from the ideal model as yet, and to implement it, software has to be totally redesigned and redeveloped from scratch. You cannot get the benefits of client-server merely by putting a graphical user interface in front of old technology that stays on the mainframe."

Users, he says, need to devolve as much control from the mainframe as possible - applications and databases ought to be delivered to the network on a server. But this means writing extra controls and messaging into the applications. Mr Dodge warns that this will delay the promised land of client-server.

"All of the current software companies and hardware companies like IBM and DEC have vested interests in keeping the software on the mainframe where possible," he says.

Claire Gooding

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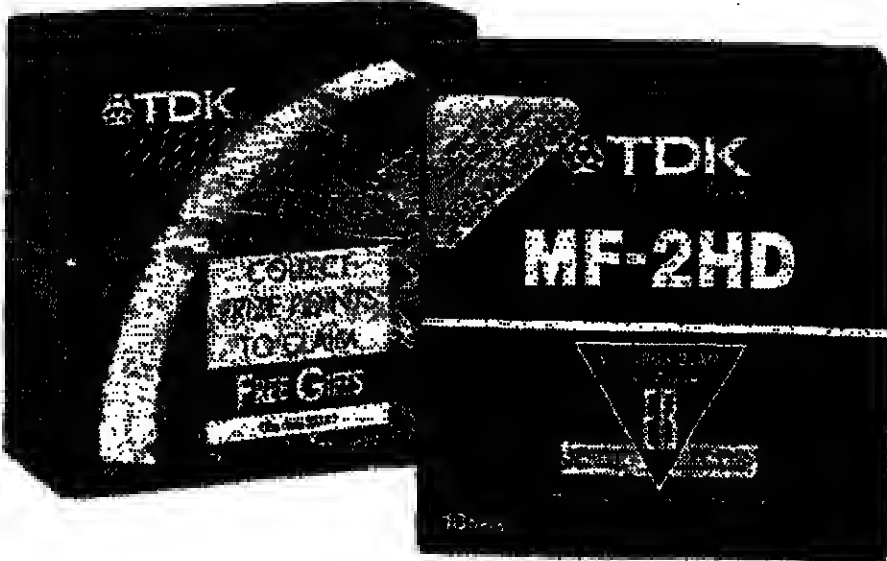
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Geoff Wheelwright looks at the attractions of local area networks

A trend to attachment

THE STATISTICS are pretty unimpressive. More than half the world's PCs are already connected to local area networks (LANs) and industry pundits predict that by 1995 there will be more business PCs attached to LANs than there were total business PCs two years ago.

So what is the attraction? Why would any group of level-headed PC users willingly surrender their autonomy and network their desktops and networks? The answer is simple: they want to connect to their colleagues. They offer a straightforward and often invisible means of sharing information and resources in each the smallest of offices.

The basic network does not have to be complicated. It is often little more than a collection of cables and special software. Among the features you would expect to find in even a modest office network are:

- 1. **File sharing.** This gives instant access to the files you need from other hard disks on the network. It allows you to share files with other users, and it allows you to share files with other users.
- 2. **Printer sharing.** This is probably the most obvious reason for sharing. It allows you to share a high-quality laser printer, colour thermal device or specialist computer system.

plotter is required for work instead of several expensive devices, the network links everyone in the office to the printer, and automatically queues requests when more than one person wishes to use the printer at the same time.

Applications sharing. If you work in an office where several people work with the same application using the same basic structures, set-up files and commands, training becomes easier and general productivity is more effective. For example, a database application is ideally suited for a networking environment, since it means that multiple data entry operators can enter information into the same database file, using the same application over the network.

Integrating run-compatible computers. Some offices have a mix of PCs, Macintoshes and data workstations. To allow them to share the same machine for the right job, a network which supports such a mixture can solve the problem of incompatible hardware software by allowing you to work on the hardware you choose and then transfer that work into a form that can be understood and used by different makes of computer in the office.

So there is a bit more to networking than swapping a few files around. But when does it become worthwhile buying a network? You would think, for example, that no matter how great the benefits, it would be

difficult to justify the installation of a network in a small office standard AT-compatible systems in a small office.

But if you link them to a file server which offers everyone the same hard disk rapidly and provide them with the benefits of using new "workgroup applications", then it just might be worth the investment. The answer in the question of the minimum number of PCs needed to make a network worthwhile depends, like any other aspect of personal computing, on both the applications you are lacking now and those you plan to handle in the future.

There are even some, admittedly marginal, reasons for networking two machines. Why throw away your old 286-based personal computer when you have that nice shiny new 386 or 486? Why not have a simple network and connect the two? This allows for CD-ROMs or tape drives, or whatever else, can then take up space in the memory of the old machine; you can free up some expansion slots and, perhaps best of all, carry on using your old hard disk.

It is surprising how many people think that the issue of

whether or not they need a network is defined by how many machines they have, not by the job they expect those machines to do.

Having decided that you need a network, the next step is to consider the key issues in evaluating what is available. The first - and most important issue - is your long-term plans about what you want the network to do.

If, for example, you merely need a short-term solution to sharing files between some low-powered PCs around a small office - and you plan to upgrade the PCs in the near future anyway - you can be flexible in what you buy. There are literally dozens of non-standard, low-cost networks - many of which do not even require special network adapter cards - that will allow you to connect up these modest machines and share files, and sometimes even printers, between them.

At the same time, allowing network users of word-processors to carry out "revision-making" (where other members of your workgroup can go around an electronic copy of something you have written for them and mark up their corrections without making them permanent) and implementing office-wide electronic mail systems.

To do all this you will need a network which conforms to certain industry standards. There are three to worry about: cabling, network adapter cards and network operating system software.

Cabling is probably the simplest of choices - it is usually dictated by the adaptor card you use. Among the more popular cabling choices are Ethernet, token ring, twisted pair, Arcnet, PhoneNet (using RJ45 telephone cabling) and IBM Token Ring. As for the adaptor cards, they also come in a variety of flavours - including Token Ring, AppleTalk (to allow PC users to connect into Apple Macintosh networks), IBM PCN and lots of others. In addition, a growing number of PCs - such as Apple's Q-Link - come with network adapters built onto the mother board of the machine.

With most low-cost networks, however, the whole thing comes as part of a single package - containing cabling, network adapter card and network operating system software. Some of the more popular packages are Novell NetWare 2.0, Apple's Macintosh System 7.0 and Microsoft Windows 3.0. Updates are on the way for both Mac System 7 and Windows 3.1.

NetWare 3.11, however, is a bit of a slightly different colour. It is designed for more powerful PCs and is a good

deal faster than NetWare 2.0, providing support for up to 250 users and including facilities for high throughput and WANs. There are also a good many other administrative features built into NetWare 3.11. Its remote management facilities, for example, let network administrators service remote servers from anywhere in the network - particularly useful when you have a large network spread around a large office building or work site.

Probably the most important point about NetWare 3.11, however, is its ability to run on a huge variety of hardware and operating system platforms. In addition to running under DOS, OS/2 and Windows - NetWare 3.11 also runs on the Apple Macintosh, Sun Microsystems SPARC machines, HP Apollo Workstations, IBM's AS/400, SCO Unix, Steve Jobs' NEXT machine and a number of other Unix workstations.

But Novell is not the only company offering network operating systems. The other major player in the market is Microsoft with its Lan Manager 2.0. This is a re-coded last year, Lan Manager 2.0 supports both OS/2 and Windows-based network servers. It provides automatic configuration for each major server type - including those with 32-bit network-optimised I/O subsystems. This improved support is supposed to speed up all network operations - particularly where disc access is concerned.

Local area networks: how the business is developing

The 'no-brainer' choice

THE local area network (LAN) business is growing much more quickly than the PC industry as a whole and everyone - from software houses to PC hardware producers - is busy trying to hup on the busy train.

The arrival of effective PC networking standards a couple of years ago initially provided much of the fuel for this growth. More than 60 per cent of the networked market has now standardised on Novell NetWare. And that market share is growing - as the choice of a basic PC network is what US developers call a "no-brainer" decision.

Because Novell offers support for all manner of network configurations, there are few variables in this buying decision to confuse the little grey cells of network administrators.

Novell itself is trying to make the decision even easier by moving into the traditional minicomputer market with support for a number of mini-

computer systems. Mr David Miller, its vice-president, says Novell expects real things of only over the next few years.

"We felt there needed to be a greater purity in the Unix environment, so that was one of our chief reasons for being a partner of Unix Systems Labs (with AT&T)," Mr Miller says. "We want to produce a consistent version of NetWare that is open and portable so we can move that into a Unix environment."

Though Novell is dominant in the market, it has not yet forced its competitors to roll over and die - there is still a choice for those who seek it out. To start with, whatever you may hear about Microsoft's current attitude to OS/2 and Lan Manager, the fact of the matter is that Microsoft is fighting tooth and nail to keep its foothold in the PC network operating system market.

In fact, only last year Microsoft announced a new version of its Lan Manager 2.0 network software. Now, new ver-

sions of Lan Manager will be designed to fit in with Microsoft's Windows NT (New Technology) strategy. This permits Microsoft to offer an environment that runs on anything from laptops and entry-level

of network personal computer applications continues apace. Lotus Development, for example, is one of the PC industry's classic success stories - rising to overnight riches with the development of its original Lotus 1-2-3 spreadsheet in 1982. Despite a huge product line and installed base of users, Lotus has recently been making a big play for the PC network software market.

Mr Jim Moor, Lotus president and chief executive officer, says that networking and "workgroup computing" (where PC users use specially-designed software to share work over a LAN) are to be major planks in the new Lotus platform - one which appears to be built from the base of the

company's Lotus Notes network communications product.

"Our strategy is to enable people to work together by connecting disparate information systems and

Microsoft "should mend its differences with IBM"

environments, connecting people to the information they need, connecting products with one another and connecting people with people," he explains.

By next year, 60 per cent of all PCs will be connected to local area networks. By 1994,

there will be more business PCs attached to LANs than there were total business PCs two years ago. Just as 1-2-3 was the defining application for personal computers in the 1980s, we believe that Notes will be the defining application for network computing in the 1990s.

While Notes may be the first true groupware product, it is for Lotus the beacon for where we are taking our products. We are well under way with a group of products that will be the defining application for network computing in the 1990s.

Finally, there is one wrinkle in the whole personal computer networking business at the moment - and that lies in the role played by the computer operating system. IBM, Microsoft and Novell (through its recently-acquired Digital Research subsidiary) are fighting over who will control the base operating systems upon which PC networks are built. Although Microsoft is heavily

favoured to win this battle - with a combination of its MS-DOS operating system and Windows operating environment - IBM is still putting a great deal of resources into developing OS/2, the operating system originally co-developed by IBM and Microsoft as a successor to MS-DOS.

According to Mr Philippe Kahn, founder and chief executive officer of Borland International, the personal computer database company, the battle between IBM and Microsoft is causing problems for the whole industry - including Lan developers. "There's some concern and there's confusion about operating systems," he says. "I think Microsoft would be much better off in mending its differences with IBM. The best thing for the industry and its customers is for more cohesiveness in the base of the industry. Really, the ball is in their court."

Geoff Wheelwright

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NETWORKING AND OPEN SYSTEMS 6

Profile: HEWLETT-PACKARD

It pays to take a Risc

FIFTY-TWO years ago, Dave Packard and Bill Hewlett formed a company in the US to manufacture a resistance-capacity audio oscillator for testing sound equipment.

Today, Hewlett-Packard heads into the 1990s as a force to be reckoned with in its specialised field as an international manufacturer of measurement and computation products and systems used in industry, business, engineering, science, medicine and education, in approximately 100 countries. It employs more than 91,000 people worldwide and had revenue of \$13.2bn in its 1990 fiscal year.

Clearly, Hewlett-Packard has enjoyed a sound business plan over the years to survive the rough and tumble of the international information technology industry. Its secret lies in its ability to foresee trends and react quickly.

It was ahead of its rivals in identifying two key trends driving the computer marketplace today. First, the move to standards-based open systems and software, where all makes of equipment work together. Second, the growth of distributed client-server computing in which desktop computers or "clients" are the window into a diverse, integrated network of general-purpose minicomputers, mainframes and specialised servers.

Hewlett-Packard believes that these trends have emerged because many organisations are suffering what it describes as an architectural crisis characterised by product proliferation, technical incompatibility and wasted data.

The company's answer to the problem is an open systems commitment in its broad range of personal computers, workstations, servers and desktop peripherals. Its early commitment to the development of reduced instruction set com-

puting (Risc) architecture, where the speed at which the processors can execute instructions is increased, enhanced its success. Hewlett-Packard spent \$1bn changing its whole system range to this technology at a time when even International Business Machines, the world's largest computer manufacturer, was avoiding Risc.

Hewlett-Packard now plays a leadership role in forging industry standards that define the interfaces between different hardware and software elements, so creating open systems. It is a committed supporter of the Open Software Foundation (OSF), an international group of companies which have merged their tech-

The only cloud on the horizon has been its workstation business

nologies to create open systems standards for others to follow.

In 1988, the OSF adopted the graphical user interface motif, which has Hewlett-Packard components and provides users with a standard way to access information. It competes against Unix International's Open Look package from Sun Microsystems.

Last year, the OSF chose Hewlett-Packard networking technologies as components of its distributed computing environment, which enables users to access company-wide information from their own desktop systems. For example, marketing managers can access information worldwide with software they buy off the shelf.

They can write a report in ink and get information from Tokyo on manufacturing production schedules and from Chicago on engineering designs. They can also assem-

ble financial results from business units in North America, Europe and the Pacific Rim. The European Commission has endorsed the distributed computing environment.

Last month, the OSF as the standards organisation selected three Hewlett-Packard products to form the core of its distributed management environment, which allows users who manage a worldwide computer network to handle problems from one location. The aim is to allow users to view on their own screen a map of the entire network of multi-vendor systems in use and so be able to take fast, appropriate action when a problem occurs.

Emphasising Hewlett-Packard's commitment to standards is its award-winning NewWave graphical software environment that makes advances in the usefulness of desktop computers. NewWave allows applications from different vendors to be tightly integrated and gives a user access to all a computer's functions from a single environment.

NewWave pioneered object-management technology and was the reason why Hewlett-Packard helped found the 70 company-strong Object Management Group. The group's mission is to help the industry create standard interfaces for software "objects" that can be used as applications "building blocks" greatly to improve software quality and productivity.

NewWave has spawned the concept of NewWave Computing. Hewlett-Packard's open systems vision for the future. The aim is to link a variety of computers in a network so they can operate as one. The approach is based on open systems and advanced software technology so that users can build on computing resources they already have.

Users are helped in their

task in being able to draw on more than 4,500 third party solution providers who round out Hewlett-Packard's own offerings. Workstation deals include Mentor Graphics at \$400m, US West at \$25m, NTT at \$38m and Nissan at \$13m.

Hewlett-Packard has also expanded its relationship with Hitachi by licensing Hitachi to make and sell microcomputers based on HP's PA-Risc architecture. And Oki Industry of Japan has teamed up with Hewlett-Packard to build jointly and operate a printed-circuit board manufacturing facility in Puerto Rico.

With the political clout of a standards organisation behind it, and midrange computing systems in good grid positions in the Unix operating system race, Hewlett-Packard looks set further to consolidate its position in the open systems markets of the future. The only cloud on the horizon has been its workstation business, which, despite large orders, has not lived up to the promise shown by the company's acquisition of Apollo in 1989.

The problem lies in competition from International Business Machines and its popular RS/6000 system. The only consolation for Hewlett-Packard is that boxes from its rivals Sun and Digital Equipment are also under threat. Hewlett-Packard is reported to be hitting back at IBM by launching top-end mainframes next month, further extending its product range.

Lindsey Nicolle

Profile: OLIVETTI

A veteran after four years

OPEN SYSTEMS have been the main course in computer industry presentations for the last few years. Walk in on any significant manufacturer and you will find the overhead projector loaded with Venn diagrams overlapping in crucial areas of networking, database, PCs, minis and mainframes.

Of course, the customer features, but only as the lucky recipient of a vastly expensive all-singing, all-dancing system that covers his every business need. Or, rather, keeps him quiet until the supplier is ready to sell in the next box of tricks the lull has dreamt up.

Yet the crucial fact about open systems is that the computer industry has not embraced open systems because it wanted to. It was forced down this path by a user revolt against proprietary systems locking them in to one supplier. And once users gain the right to make a painless switch of hardware vendor, they will exercise that right.

Olivetti is proud of its open systems heritage. It made a commitment to open systems in 1987, and four years is a long time in the computer industry. Open Systems Architecture (OSA) is the framework for Olivetti's offering in the field. OSA embraces standard hardware in the form of Intel chip sets. The OS/2 PC operating system keeps Olivetti PCs in tune with everyone's idea of IBM compatibility while larger machines run the operating system that started the open systems bandwagon, Unix, rolling.

Olivetti has stamped its mark on OSA in the marketing of industry sector packages. Branded as application profiles, these assortments of technology have been selected to address customers' needs across industry.

Thus, a wide-ranging portfolio of office systems, includes integration of Microsoft's phenomenally successful Windows operating system. Olivetti has made substantial inroads into the banking and finance market on the back of personal banking (PB), which governs a bewildering array of products. The point is to take that confusion out of the bank's agenda. Olivetti angles for contracts that embrace the

Pooling of talents and systems: "that's where we strike oil"

long-term management of technology.

The OSA factor means integrating products from dominant suppliers in the market. The selling proposition for Olivetti sales teams is their willingness to undertake a very detailed study of the business sector in question. Olivetti's success in winning finance sector contracts suggests that it has found a way to implement OSA as a part of the client's end product.

Barclays Bank has farmed out its branch equipment maintenance to Olivetti. The \$50m three-year contract relieves Barclays of a techni-

cal burden while Olivetti engineers oversee equipment from 270 separate suppliers. What distinguishes this deal is the absence of Olivetti systems. Barclays bought in systems expertise, not new systems.

Banks are traditionally tough customers. Olivetti won the Barclays' contract on the understanding that it could support whatever computers Barclays chose to install in its branches. The contact with day-to-day banking operations has paid off.

Portman Building Society was formed out of a merger in October 1990. Confronted with two sets of computer systems spread across 100 branches, the Portman turned to Olivetti to install an OS/2 based PB environment. Portman is spending \$2.5m with Olivetti to remain free to adopt whatever systems it wants in the future.

Just how far down the road of co-operation Olivetti has gone was seen at the Institute of Directors (IoD) last month. Management consultants KPMG brought Microsoft boss Mr Bill Gates and Dr Andy Hopper of Olivetti's Cambridge research centre together to address 50 IT heads from blue chip companies on future business computer systems.

The Cambridge lab is run jointly by Olivetti and Digital Equipment (Dac). Mr Gates unveiled the next step in the march of his Windows operating system - Windows NT will take advantage of

Advanced Risc Computer Specification (Arcc) machines to the graphics, video images and external media like faxes together on one screen. Arcc workstations are under development by an industry consortium including Olivetti, Dec, Compaq, Microsoft and Unix experts SCO.

Mr Paolo Tosi, Olivetti's UK managing director, regards this pooling of talents as the only way to keep in tune with his customers. Olivetti is integrating systems both in the development stage, through technical collaboration with former fierce rivals, and in the commercial market through TPM contracts. "That's where we strike oil with a customer, with the ability to run a professional project, to deliver to a schedule, going live without a hitch."

Olivetti's whole-hearted commitment to open systems has proved attractive to users and a commercial success. But the second rule of open systems, the power of the customer to turn away, has also been borne out. In 1989, Olivetti won a \$10m contract to supply the Ministry of Defence with Unix systems.

When Olivetti bid for repeat business this year, it lost out to ICL. The MOD switched suppliers with the stroke of a pen and undermined the meaning of open systems. Mr Tosi acknowledges that the best environment for the customer is a persistent challenge for the systems supplier.

Michael Dempsey

Profile: SUN MICROSYSTEMS

An open architecture route to fame

SUN MICROSYSTEMS, the multi-national, billion-dollar US corporation, is one of the main standard bearers of open systems.

Sun (the Stanford University Network) was founded in 1982 and now commands the largest worldwide share of the computer industry's fastest-growing market segment, workstations and servers, according to market research firm International Data Corporation.

In the 1990s, it is predicted, such technology will overtake the traditional computing infrastructure of networked personal computers and proprietary, time-sharing minicomputers. Sun reckons its workstation and server philosophy is the fourth wave in the history of computing, the other three being the development of mainframes, minicomputers and personal computers. Certainly, the growing number of corporate disciples of Sun and its computing strategy adds weight to its claim.

Sun's rise to fame has been on the back of the basic belief that computer users are tired of being locked into buying expensive, proprietary computer systems from one vendor.

Such systems are traditionally incompatible with rival systems, forcing computer users to be faithful to one product range, irrespective of need, purely to protect substantial investments in information technology.

Sun set out to give users more buying power by developing a range of products based on an open architecture designed to unite all types of hardware and software. It centred its development around the Unix operating system which runs the inner workings of a computer, being the intermediary between the application software and the computer. Unix is a system that has rapidly gained worldwide acceptance as a standard for both technical and commercial

applications.

But in those early days there were several different versions of Unix, none of which was truly geared towards open systems. This limited the sales volume that Sun craved to dominate the blossoming open systems field, and so it teamed up with Unix's creator, AT&T, the telecommunications group, to develop a more open version of the operating system, Unix System V.4.

Sun quickly became the mid-range company to watch as it in effect legitimised Unix in the broader commercial marketplace.

Striding ahead of its more

Many more licensees prefer to be anonymous

reticent and less well connected competitors, Sun sealed its long-term strategy in 1989. In that year, Sun dumped its two key microprocessor chip suppliers, Motorola and Intel, and started work on an advanced type of desktop machine built around a new, super-fast architecture called reduced instruction set computing (Risc). The Motorola and Intel chip processors (the engine of the workstation) were replaced with a chip designed by Sun and called Sparc.

The determination by Sun to achieve truly open computing, even if it meant redesigning the microchip, has laid the company open to accusations of proprietary intentions every bit as selfish as those of its contemporaries. However, Sun lost no time in marketing its Sparc Compliance Definition listing the requirements for Sparc hardware and software compatibility. Clone makers and software developers were quick to recognise the potential of Sun's open systems product strategy, and they provided the industry-wide investment and commitment that

Sun desired.

Today, Sun has collaborative technology deals on Sparc-based systems with some of the largest industrial conglomerates in the world, including Fujitsu, Amada, International Computers (ICL) and Xerox Corporation. Many more licensees prefer to remain anonymous.

Still, Sparc International, a consortium of 130 vendors using the technology, believes that we are only in the infancy of the Sun-compatible or Sparc-like industry. It estimates that the number of Sparc-based systems sold will increase from 250,000 today to over 1m in 1993.

Many software companies have jumped on Sun's Risc bandwagon and there are over 2,000 software applications - Sparware - available that operate on Sun's systems. Sun's own software subsidiary, Sunsoft, formed earlier this year, has shown them the way.

The expanding base of commercial Unix and personal productivity software has helped make Sun's hardware even more attractive to corporate purchasers. Notable orders include those from Northwest Airlines, New Zealand's Inland Revenue and Mitsubishi Bank.

Sun has complemented its Sparc microprocessor architecture and Unix operating system platform with its Open Look graphical user interface and Open Network Computing environment. Open Look allows users to work with ease across different kinds of computer equipment, including systems from organisations such as Digital Equipment Corporation, Hewlett-Packard and International Business

Machines and also allows access to a range of network resources.

Advanced networking products and services complete Sun's open systems focus.

Sun's ultimate goal is to leave its mark on the 1990s in the way that personal computers dominated the 1980s. It wants to empower workgroups with its workstations and servers in the way that personal computers empower the indi-

vidual. It is fond of boasting that while others build computers that network computers, Sun offers computers and associated products that network people.

Sun is confident of its lead over its rivals because others have to support multiple product lines, architectures and even multiple operating systems. Its single computing architecture is a simplified

Continued on Page 7

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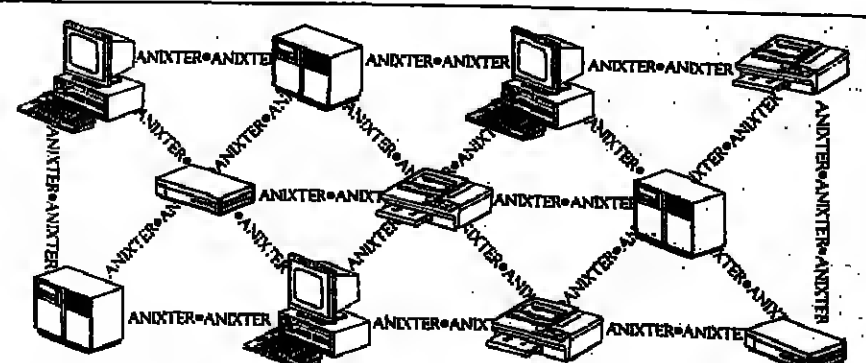
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NETWORKING AND OPEN SYSTEMS 7

Phil Manchester looks at the prospects for object-oriented technology

Last rites for esoteric 'priesthood'?

AT THE end of this month, what could be the last technological 'priesthood' of the computer industry will meet in London to lecture on and discuss the esoteric subject of object-oriented technology.

The seminars and the conference in object-oriented programming (Scoop) has lined up a Who's Who of the object-oriented technology world to explain what it is and to discuss its implications for the future of computer systems.

The reason that this group of worthy academics and industry researchers could be the last esoteric 'priesthood' in the computer industry is simple. One of the main aims of the object-oriented approach is to make computers more accessible to non-technologists, eliminating the need for armies of experts to operate and program them.

Object-oriented technology provides a framework for pre-defined software components or objects which can be used by end-users to build their own applications. If the protagonists of object-oriented technologies are successful, it could make technology priesthoods unnecessary.

This possibility is reflected in the title of programming expert Michael Jackson's Scoop paper, 'Object Orientation: The Last One?' Mr Jackson, a pioneer of software engineering methods, discusses whether object-oriented design might be the final stage in the evolution of software development.

By defining the behaviour and the interfaces to software components, object-oriented design aims to bring an ordered, engineering approach to system development.

This should make it easier for application users to construct their own systems in a similar way to building 'Lego' models - although it is still early days for the concept and users are only just beginning to become interested.

The computer industry is, however, taking object-oriented technology very seriously. Scoop takes place against a background of furious activity by computer manufacturers and software developers to take object-oriented

To construct one's own system should be like building a 'Lego' model

technology on board and bring its undoubted benefits to end-users.

The recent unprecedented co-operative agreement between IBM, the world's biggest computer company, and Apple, its major rival in the personal computer market, is an example. It aims to create a new breed of high-performance, object-oriented workstation by the mid 1990s.

Hewlett-Packard, the mini-computer manufacturer, has moved into the general software market with its NewWave object-oriented inter-

face for personal computers. And leading software developers Microsoft, Borland and Oracle have pledged themselves to developing their future products with the object-oriented approach.

The Object Management Group (OMG), a US-based industry group set up in April 1988 to promote object-oriented technology, has seen a massive growth in its membership in the past year. A year ago OMG claimed 80 members; now there are 170 OMG members and the number continues to rise. Microsoft and IBM, both of which had delayed membership, joined early in the year.

Significantly, large user organisations are taking notice. Mr Christopher Stone, president of OMG, says that he is currently talking to Unilever, Borealis, Dupont, John Deere and American Airlines among others. He expects them all to be signed up as members by the end of the year.

'Object orientation is now big time and the leading-edge users can start to apply pressure to their suppliers to conform to standards,' says Mr Stone. The rapid growth of OMG's membership is important because OMG fulfils the role of co-ordinator for different companies' efforts to develop object-oriented technology. It has defined a framework and a set of standards which have been widely adopted.

It has also started to put flesh on the bones with products. At the end of this month, the so-called object-re-

quest broker (ORB), the central systems software component to handle communications between objects, will be unveiled at Unix Expo in the US. This will provide a base for future development of object-oriented systems.

Mr Stone emphasises the importance of the wide acceptance of object-oriented standards. 'Without consensus, it will not work. We must have agreement on how objects will talk to each other or we will lose the benefits,' he says. He has had some success in promoting compromise and co-operation between OMG members. The technology to build the ORB was derived from competing bids from

The IBM-Apple workstation pact 'has helped us enormously'

DEC, HP and others - all of which have agreed to co-operate on a single technology.

Mr Stone also applauds the recent announcement by IBM and Apple to co-operate on its workstation development and sees it as giving credibility to the object-oriented cause. 'It is a significant risk for both companies - but it has helped us enormously.'

Mr Richard Strong, UK managing director of Next Computer - the workstation builder founded by Mr Steve Jobs, the former Apple president, also welcomes the IBM/Apple agreement. Next is one

of the few companies that has already taken on many of the radical ideas of object-oriented technology in its range of high-performance workstations. Mr Strong claims that Next is about two years ahead of IBM and Apple.

'The IBM/Apple announcement has verified the position we took three years ago and it helps a lot to have them define the market for us,' says Mr Strong. He recognises, however, that users are unlikely to be fooled by empty promises and that object-oriented technology must deliver. It must be able to offer something to users which make it worth paying the price of migration to the new technology.

'It really is a new concept in building end-user software. But we need tools to make it easier. There is a danger that object-oriented technology will raise users' expectations and then see them disappointed.'

He points to examples of desktop publishing: 'DTP caused problems because it gave anyone the power to be a designer - but you still need the design training to make it work properly.'

'The tools to exploit object-oriented technology - like our own Nextstep - are becoming available. They will cause users to start forcing the pace in about a year's time,' Mr Strong says. Meanwhile, the software priesthood will continue to push the technology as a panacea to the problems of software development - despite the long-term implications for its survival.

GRAPHICAL USER INTERFACES

Big stride ahead

POWERFUL modern computers offer more than faster processing and bigger storage capacity. They have also caused a revolution in the way computers are used. More and more of a computer's power is dedicated to making life easier for the user. The greatest stride forward in the last year has been the wide acceptance of graphical user interfaces (GUIs).

Pioneered by Xerox in the early 1980s and popularised by Apple with its Macintosh, the GUI has totally changed the way many use computers and helped them to gain more direct benefit from their systems. GUIs represent programs and data files on a display screen which makes them easier to understand and use. Combined with high-resolution screens and mouse pointers, GUIs have opened up new opportunities for application builders and attracted many new users to computing.

The final seal of approval in the last year has been the success of Microsoft's Windows 3 GUI for the standard IBM-compatible personal computer (PC). It stormed to the top of the best-selling software charts and Microsoft claims it has sold 3m copies in the first 18 months. For less than £100, Windows 3 transforms the IBM PC into a full-blown workstation with a multi-colour, multiple window environment comparable to, if not quite as good as, the Apple Macintosh.

Software developers have rushed to support Windows 3 and all major suppliers now

either have Windows versions on the shelves or are working fast to get them there.

The GUI has also become a major issue in the battle between the various operating environments for the mid-range computer market - with each faction presenting its particular variation on the Macintosh/Windows theme.

The result is that all mainstream software product development is now, quite rightly, focused on GUIs as the primary interface between humans and computer systems. They make computers much easier to use and the imposition of consistent standards makes new software applications easier to come to terms with.

While the appeal of the GUI is obvious in applications such as graphics design, desktop publishing and advanced word processing, its application to the more mundane tasks associated with traditional data processing, such as accountancy and manufacturing, has been slower.

But there are signs that this is changing. Database developers Oracle and Borland have shown strong commitment to GUIs for their future front-end tools developments. And leading

accountancy software suppliers are also reacting to the market trend.

Sage, one of the UK's biggest accountancy software developers, has recently announced a version of its package with a GUI. And Sybiz, an Australian software house that there is a strong trend away from surrounding computers with experts. Users want control and the GUI gives us a way to deliver it,' says Mr Mike Maund of CA in the UK.

One of CA's main markets is for operational control software which allows mainframe resources to be used in the best way. Mr Maund says that the company will provide a GUI extension to its system management products. Called Viewpoint, it is compatible with Windows 3 and will 'help the move away from centralised machines to network environments'.

CA, in line with most other suppliers to the PC market, is also bringing its PC products across to Windows 3. 'We have announced Superproject this month and Supercalc will follow in the next three months,' says Mr Maund.

As far as extending the GUI to end-user applications is concerned, Mr Maund agrees with Mr Tate. 'You don't need a GUI for details and credits; but it is very useful when you want to know something. We see it as an information delivery vehicle. If it is nice and easy to use, more people will use it.'

In a wider context, 'Features like cut-and-paste which GUIs offer would be useful in management information systems or for preparing a sales quote based on order information.'

'I think there will be much more to come in this area. Sage's decision to pick it up is very interesting because it is the largest seller by module in the UK.'

Accountancy is not the only established area of data processing where GUIs are having an impact. Management of large systems - particularly those based on networks - is increasingly presenting problems for large organisations. Computer Associates (CA), the big software product supplier, sees the GUI as providing a flexible solution to systems management problems.

'GUIs are a *de facto* standard for all new product development in CA and we see it as more than making systems easier to use. Our heavy involvement with mainframe software shows that there is a strong trend away from surrounding computers with experts. Users want control and the GUI gives us a way to deliver it,' says Mr Mike Maund of CA in the UK.

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Phil Manchester

Open architecture route to fame

Continued from Page 6
technology that should enable it to retain a leading market share in the industry.

But while Sun's future looks assured - there has even been speculation that Fujitsu has an acquisitive eye on it - the company has its crosses to bear. It recently abandoned one of its US corporate marketing slogans, 'the network is the computer' and tried to ignore jokes that it did so because the phrase implies rival X-terminal technology. (X-terminals combine the

power of a workstation with the compactness of a terminal.) Turning the other cheek was rather tricky for Sun as it

X-terminal technology may have the potential to oust workstations

meant looking straight at its Mountain View neighbour, Network Computing Devices, which specialises in X-terminal technology and is reported to be trying to take out a copy-

right on the phrase.

X-terminals are already beginning to compete with the workstation at the corporate level and IDC and Dataquest analysts predict that demand for them will jump from 51,000 units in 1990 to 788,000 in 1994. Sun's strengths lie in the low-end workstation market and it is here that X-terminal technology is expected to bite. Some think that X-terminals have the potential to oust workstations from corporate IT strategies within five years. But with Sun's investment in

the high-end workstation and server markets, it is unlikely to be badly mauled.

Where Sun has perceived a threat to its domination of the open systems marketplace is in the continued thrust of Intel-based machines. Accordingly, Sun has shrewdly invested in Intel systems, and is currently bidding for the products division of Eastman Kodak's Unix software house, Interactive Systems. This California-based company sells one of the most popular versions of the Unix operating systems for Intel-

Worldwide commercial Risc/Unix market - 1990

Total: \$2.4 billion

HP \$1,125m

MIPS \$100m

Pinnacle \$200m

Source: Aberdeen Group

based machines.

Sun has recently consolidated its position in the high-end Unix server market, completing a suite of products that can act as data base and file

servers. It hopes to attract users moving to distributed client server networks, although it faces keen competition.

Lindsay Nicolle

IBM \$250m

Other \$225m

Sun \$200m

Digital \$300m

Other \$225m

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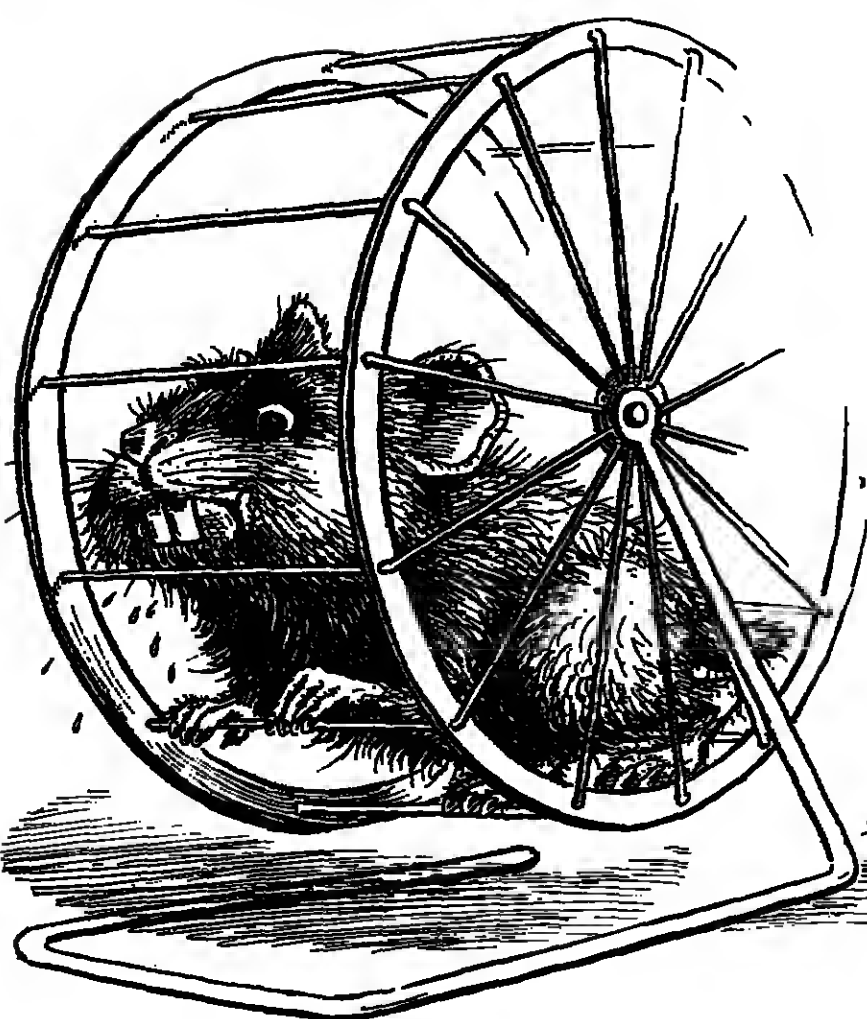
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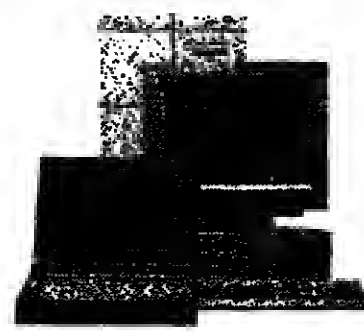
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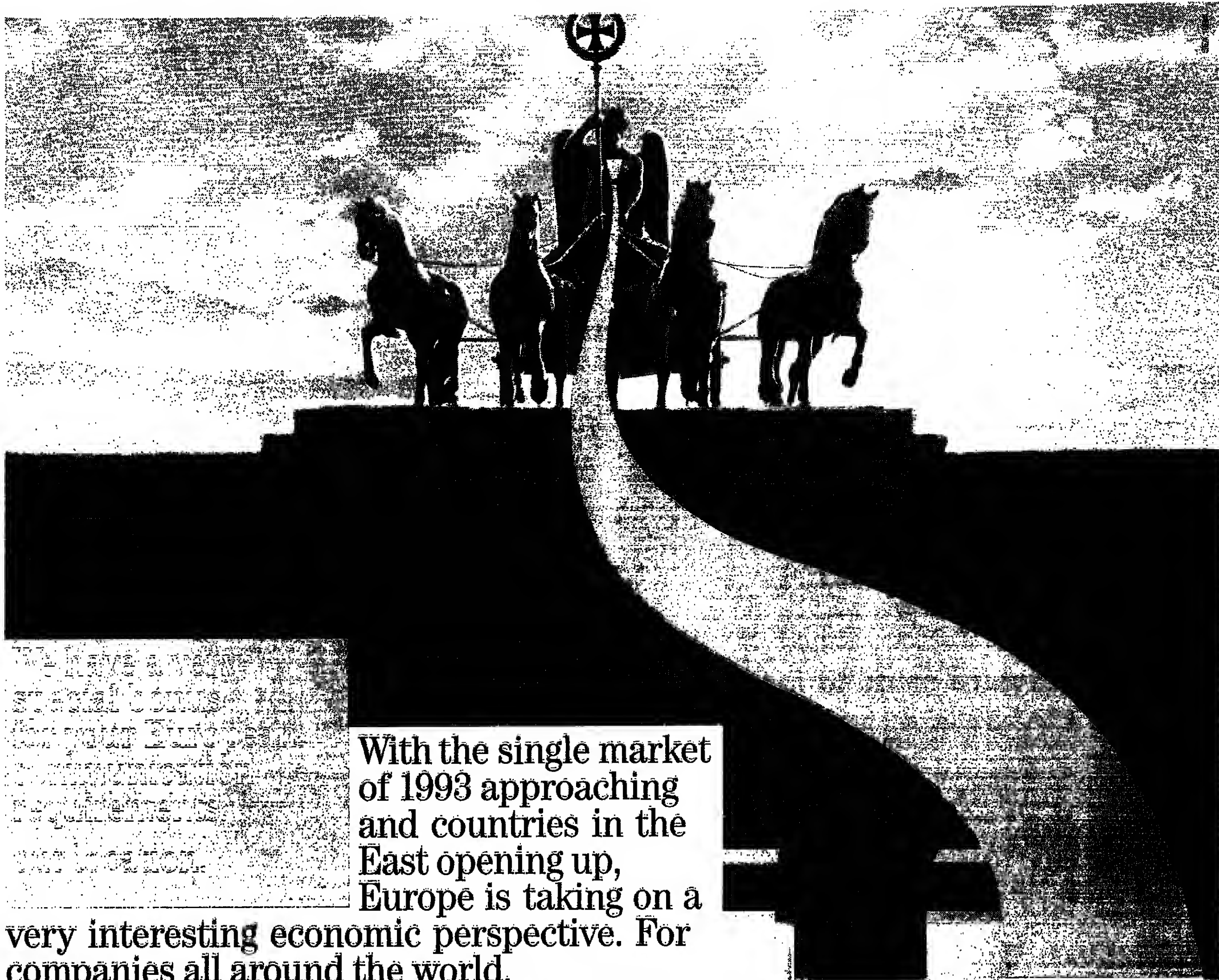
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NETWORKING AND OPEN SYSTEMS 9

INFORMATION TECHNOLOGY

Cost benefits seen by governments

GOVERNMENTS, with their huge expenditures on information technology, were among the first to understand the cost benefits that were implicit in open systems and client-server computing.

They built models for vendors and others to follow - the UK government's Clasp Osl profile, for example - and their policy of insisting on open systems in public procurement was instrumental in changing attitudes among manufacturers. They realised that valuable government orders would be denied them unless they could meet the contractual requirements.

These orders can be vast in scope. The UK subsidiary of Groupe Bull of France, for example, was last year awarded a £50m contract as prime contractor to computerise the offices of the Inland Revenue. According to Mr. Carol Wyatt, Bull's project manager, the original intention in developing an Inland Revenue "office of the 1990s" was to provide greater resilience within the Revenue's existing computer network. Based on dumb terminals linked to mainframes, it left 18 staff with restricted means of carrying on with their work if the terminal broke or a line went down.

With the decision to move to open systems communications, however, the project took on a new flavour. By 1990, Bull should have installed 500 Unix servers and 25,000 workstations. It will be, it is thought, the largest Open Systems Interconnection (OSI) network in the world.

The workstations are special in that they are based on Intel's 286 chip but are "discrete", a security measure which means that information cannot easily be removed from or put into the system. The system runs on the newly established Government Data Network.

Unix, with its background in the universities, is not noted for its security features; the version Bull is providing for the Inland Revenue is "vanilla Unix with some added security" according to Mr Wyatt. Bull's own "Securis" system was thought to be overkill.

Security was a major consideration in another UK government project, the Ministry of Defence "Cobots" (corporate headquarters office technology system) project awarded earlier this month to a consortium of ICL, Hewlett-Packard, BICC,

Coopers & Lybrand, Deloitte and Data Logic.

The Cobots project costs more than the Revenue initiative - it will involve about 10,000 terminals and several hundred Unix servers. The aim is to provide a streamlined communications systems together with personal productivity tools for its users - word processing, database, word and document access, to other systems.

Data Logic was responsible for the design of the system. It had to balance security, control and open processing. Cobots started as an open office mail and system, the main reason for its design was to prevent unauthorised access, encryption technology and tamper-resistant computers, proof against radio leakage which could be read by receivers outside the building.

Outside government interest in client-server applications is

The Ministry of Defence's Cobots project will involve 10,000 terminals

growing as companies look at ways of "downgrading" from traditional mainframe applications in favour of personal computers linked by local area networks.

Citibank in the UK, for example, has downgraded many of its cash management and securities applications. According to Mr. Edmund Rutkowski, Citibank cash management project manager, the advantages of client-server computing are already making themselves felt.

Cash management services are run on behalf of the bank's large corporate customers who use the bank as an intermediary as they move money from account to account to take advantage of interest rate differentials and so on.

It is a service which used to generate a lot of telecommunications traffic and sales of paper. The mainframe-based system has now been replaced by a series of personal computers using the IBM operating system OS/2 together with Microsoft Windows and connected together in a network by Local Area Network (LAN) Manager networking software. The bank was a pioneer of this (and indeed many other) computing technologies. Work on

the system started in 1987.

Essentially, the application is to take unstructured messages, which may be electronic or paper, and turn them into structured messages easily handled by the bank's back office computer system. The objective of the technological change was to handle the growth in traffic expected as a result of the single European market after 1992.

Mr Rutkowski experimented with the idea of using artificial intelligence to handle the conversion, but decided against it. The final result would have to be checked by a human operator, so there was limited value in automated handling.

He says that the system gives better control than paper and needs less support than mainframe technology. The cash management department is now in effect self-sufficient in technology. Fewer members of staff are needed and there has been a decline in the number of claims resulting from errors in processing.

Northwest Airlines of the US, which merged with Republic Airlines in 1986, is another pioneer in the use of information technology. It was an early customer for "intelligent" voice communications networks using an AT&T Message Switch to reduce traffic loads between reservation centres and provide a 24-hour service.

Now it is applying client-server techniques to its passenger revenue accounting system. Many airlines calculate revenues by a statistical technique depending on a sample of airline tickets (lift coupons) and audit coupons from their travel agents. This is because of the huge daily volume of coupons.

Northwest wanted to audit all its coupons to get accurate revenue figures, check on the efficiency of its agents and get better data on its customers. The system it settled for included workstations, servers, artificial intelligence and image technology, scanning 170,000 coupons into the system daily at 17 a second. Local area and wide area networks are used to connect the host computers, specialised servers and workstations.

The company now claims more accurate revenue figures and improved customer service. The airline has genuinely achieved competitive advantage through innovative use of information technology.

Alan Cane

OPEN INFORMATION ARCHITECTURE

Business and IT: closing the gap

NEITHER A Unix box nor a communications interface diet an open system make.

That's the lesson that the world's major corporations are learning fast as they try to break out of their proprietary architectures and introduce widespread open systems.

"In the past, large customers have come to us to find out what open systems mean," explains Mr Nick Cherric, managing consultant of information technology at Price Waterhouse, London. "Now they are coming to us to ask how to do it. They have enormous amounts of data tied up in proprietary systems and they need to know how to coexist with existing systems, how to retain the value of what they have got, and to get the most out of the new world."

That is not just a matter of introducing open systems in discrete application areas. The world's major users are finding that the real cost benefits and competitive advantages from open systems can be gained only by adopting an open systems philosophy that permeates the whole of the organisation's information architecture.

"For the past 10 years or so we have been driving out open systems standards at the basic technology level," says Mr Geoff Morris, president and chief executive of X-Open, an international open systems organisation. "We have concentrated on solving the problems of connectivity between systems and the portability of software."

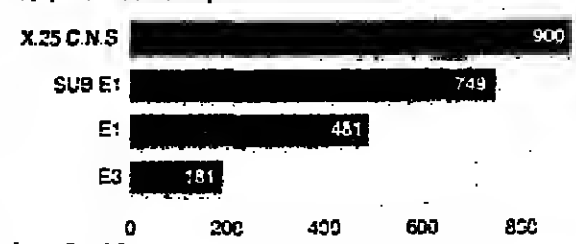
"Now we have to raise the level of activity. We must create an open framework for organisations to build open information architecture that releases across an enterprise and gives the decision-makers the information they need to do their jobs. At the moment that information is trapped in proprietary systems, so it is difficult to get at and that is restricting business. The focus now is on that information, not the information systems."

The keys to the open architecture are the tools and delivery mechanisms that co-ordinate, manage, deliver and present information to people within an organisation - tools such as relational database management systems, fourth generation languages, query systems and graphical user interfaces.

Information Builders, the US software company, supplies one of these critical toolsets. Its Enterprise Data Access (EDA) range of products allows companies to integrate their information resources no mat-

European market for WAN equipment - 1995

UC \$ million (forecasts)



Source: Frost & Sullivan

ter what the location, or operating system or the type of database. It can provide Standard Query Language access across 45 different types of database on 35 operating systems, and supports network working protocols from IBM's SNA and Digital's Decnet, to Ethernet and Open Systems Interconnection.

In practice, that amounts to a PC user running a Lotus 1-2-3 spreadsheet and being able to access information stored on one of a company's IBM mainframes, or on a Digital machine somewhere else, and

"At the moment information that decision-makers need is trapped in proprietary systems"

to merge that data into the Lotus application on his desktop.

"One of the biggest frustrations for customers has been an inability to harness all that enterprise-wide data and deliver it to the information workers who need it," says Mr Ian Bramley, Information Builders European marketing manager. "It is sometimes locked in operational systems that have been built on successive layers of technology, or hidden in new desk-top and personal computer networks."

That is a situation Shell has been trying to break out of for the past two years. The lack of adequate products on the market forced the company to create its own information architecture to cope with the duplication of data, the inconsistencies across the network and the large amounts of people and processing time it was

database. The rest is in old file formats.

The information warehouse strategy recommends that most of the data needed for regular management information requests is kept at a central location and updated by the source systems at regular intervals. This creates a consistent and easily accessible information resource for information seekers.

The information does not necessarily have to reside in the central location but Mr Cole believes that "bringing it together at the centre has many advantages because the tools we have there can add significant value to the data." One of these advantages, of course, is that this approach will help IBM sell more central mainframe power.

Some open systems observers fear that this centralised information focus may ultimately create a "data desbin" rather than a warehouse and deny some of the benefits that the decentralised power and performance of an open systems strategy allows.

Nevertheless, the attention and emphasis on the information resource and the tools that provide broad information access are a welcome step for the world's customers and the open systems movement.

"An open information architecture will give business instant access to valuable reservoirs of information around the enterprise," says X-Open's Mr Morris. "What we need are the open systems standards and the open-minded people who will be able to make this

A consistent and easily accessible information resource for information seekers

happen. Ultimately, it is this open information architecture that will close the gap between the business and the information technology people. Then we will see the real benefits of the open systems movement.

Paul Tate



Bill Gates, chairman and chief executive of Microsoft, which is fighting tooth and nail to keep its foothold in the personal computer network operating system market

The new IBM 4029 Laser Printer Family.



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NETWORKING AND OPEN SYSTEMS 10

Louise Kehoe on initiatives to unplug a 'software bottleneck'

Standards battle gets under way

THE VALUE of computer standards first emerged in the personal computer market in the early 1980s when dozens of manufacturers followed International Business Machines' lead, creating IBM-compatible personal computers, or "clones".

Because virtually all PC makers (with the exception of Apple Computer) adopted the same Intel microprocessors and Microsoft operating system as IBM, users were able to choose between dozens of competing suppliers of standard equipment.

A vast array of application programs quickly developed, stimulating computer sales. Computer buyers came to appreciate the advantages of standards through the proliferation of "shrink-wrapped" applications programs and competitive pricing for both hardware and software.

This spawned demands for "open systems" or the creation of standards spanning a much broader spectrum of computer types, centred on various derivatives of AT&T's Unix operating system.

Ironically, however, the standards that have so far emerged in the rest of the computer market are not compatible with the vast installed base of about 90m IBM-compatible PCs.

Three competing industry

initiatives aimed at creating industry standards that will encompass both the PC and higher performance computers have recently been launched:

■ The Ace Initiative, led by Compaq Computer, Digital Equipment, Microsoft and the Santa Cruz Operation, plans to create standards based on two hardware "platforms", the Intel microprocessor-based PC and the Mips Computer Risc (reduced instruction set computing) architecture. Ace is also backing two operating systems; a new operating system under development at Microsoft, called Windows New Technology, and a Unix-based operating system that will be developed by the Santa Cruz Operation.

■ Sun Microsystems recently launched a new operating system called Solaris, based on Unix, that will run both on Intel-based PCs and on computers built using Sun's Risc microprocessor, called Sparc.

■ IBM, Apple Computer and Motorola recently signed agreements to jointly develop hardware and software that would create a new standard for PCs, workstations and higher performance computers. The alliance will focus on development of technology based on IBM's Risc microprocessor, called Power PC, and a Unix-based operating system derived from IBM's AIX and Apple's AU/X.

Apple Computer's Macintosh graphical user interface will be ported to the new systems.

Both technology and market changes are driving these efforts. The "de facto" standards established by the IBM PC are 10 years old. PC technology has advanced significantly over that period, with the introduction of successive generations of Intel microprocessors and new versions of Microsoft's DOS operating system. The limitations of the DOS operating system have, however, constrained further advances in PC performance.

"It has been very frustrating from an Intel point of view to develop new microprocessor technology that theoretically doubles performance, only to see the real performance improvement degraded by a 10-year-old operating system (MS-DOS)," says Mr Andrew Grove, president of Intel.

He sees the new operating systems unplugging the "software bottleneck" that has prevented computer users taking full advantage of advances in microprocessor technology.

The role of Intel's microprocessors as the "standard" for personal computing is also, however, challenged by the new initiatives. While Intel maintains that its technology will keep pace with developments in Risc microprocessors, the chip company will face

fiere competition in a market that it has dominated for the past decade.

These efforts to establish a new operating system standard also signal a shift in the role of the "personal computer". Individual PC users don't need all this features of a multi-user, multi-tasking operating system, such as Sun's Solaris or Microsoft's NT. For many users, the power of an Intel 486 microprocessor is more than adequate.

When the PC is linked to a network to become a gateway to corporate data bases, however, the picture changes. About 20m PCs are currently connected to networks and the number is expected to double over the next 12 months.

The open systems trend has also had an important influence on the PC market, raising the issue of how to more closely integrate PCs with computers that run the Unix operating system.

Ace, Sun and IBM-Apple are now set to do battle in the marketplace, with each attempting to establish dominant standards for the next generation of personal computing by gathering the support of as many other industry participants as possible.

The situation is reminiscent of the "Unix wars" of the late 1980s when an industry schism resulted from the formation of

the Open Software Foundation and Unix International.

The PC standards battle is, however, just beginning to get under way as participants take up opposing positions. To date, none of the computer products promised by the protagonists have been brought to market and it will probably be late in 1992 when the first such products emerge.

For computer users, the PC standards battle will no doubt prove as confusing as the Unix wars. Users will have to pick through a smokescreen of marketing hyperbole to discern which approach will ultimately dominate the market.

In this situation, however, users may simply choose to defer any decision on which direction to take on future PC standards, sticking instead to the current PC standards which are adequately meeting their needs.

Unseating the established Intel-Microsoft PC standard will not be easy, despite the fact that the computer manufacturers promise to protect current investments in PC hardware and software by ensuring compatibility with new types of systems.

The unsuccessful attempts by Microsoft and IBM to establish OS/2 as a new PC operating system, demonstrate the inertia that an installed base of millions of computers can create.

Today's PC standards are therefore expected to remain dominant for several years and only in the mid to late 1990s will the PC sector finally be drawn into the broader scope of interoperable open systems.

BOOKS

Guide through the maze

OPEN SYSTEMS promise simplicity but generate complexity. The fault lies not with the concept but with the computer industry.

There is a confusion of offerings from computer system suppliers, each claiming to be open and, indeed, more open than its competitors.

Add in the profusion of organisations each fighting its own corner in a busy marketplace - X/Open, Uniform, 88 Open, Unix International and so on - and the need for a simple guide to the open systems maze is clear.

Pamela Gray's qualifications to write such a volume are indisputable. Active in open systems for many years, she was president of the international Unix user group from 1986 to 1988 and is now head of a company which aims to supply information about open systems to subscriber organisations.

There are at least two ways to approach an explanatory text about open systems. One is essentially technical, the computing equivalent of outlining why it is easier to make international telephone calls if there are global telecommunications standards or blow-dry your hair abroad if electrical power supplies are the same voltage and sockets the same shape as those at home.

The other is philosophical; in essence an approach which sets out to explain how world problems could be better tackled if telecommunications systems or electrical supplies were standardised worldwide.

While it has its fair share of technical explanation - there are five chunky appendices dealing with issues such as data handling, security and systems administration - Pamela Gray's book is very much of the latter variety.

It starts from the point of view that the establishment of such overruns have served to sow seeds of doubt

industry-wide standards (which is really all that open systems is about) is a key to solving many of the problems afflicting the industry. "Information technology (IT)," she writes, "should be made easy to use while at the same time designed in such a way as to allow innovation and competitiveness among suppliers to proceed."

"We contend that the only way to do this is through the adoption of international, widely-used, consensus standards for IT systems, supported by the entire computer industry and set in such a way as to reflect the real needs and priorities of the marketplace."

Many of these problems are already well known and their solution has not been especially connected with the establishment of open systems. They include, for example, the problem that many, perhaps a majority, of computer projects consistently overrun both on time and cost. Such overruns have served to sow seeds of doubt about the effectiveness of data processing management.

Then there is the application backlog, the fact that in many data centers the time from a request for a new piece of applications software to its delivery can be up to two years - by which time the reason commissioning the software may have evaporated.

Finally, there is the worldwide shortage of skilled computer specialists, a shortage that is unlikely to improve in the future.

Pamela Gray notes that every organisation is seeking to make its people more productive, to reduce learning times and to use staff from outside organisations without the need for retraining. They are also trying to control and reduce the time taken to develop new systems and provide a better service for their customers.

She concludes that to achieve better and more efficient use of IT and IT people some of the variation that exists in the computer industry must be reduced.

Ian Hugo's book, while no less comprehensive than Dr Gray's, is very much a practical guide for managers on how to choose open systems. There

are chapters on how to choose a supplier, for example, and among the appendices there is a list of questions to test the supplier's openness. "Is the supplier flexible or wedded to pure dogma?" it asks.

The list was, in fact, prepared by the US computer manufacturer Data General which is associated with NCC Blackwell in publishing Mr Hugo's book. He notes: "Since it is provided by an interested party, it is open to accusations of bias; test it on other suppliers to see if they foul - and where and why."

One of Mr Hugo's advantages in putting together such a book is his acute scepticism. Although an advocate of open systems, he is by no means an unthinking believer, pointing out that although open systems are usually presented as a low cost option in data processing, in some sectors they may prove more expensive than solutions based on proprietary technology. "In the long run, however, it is obvious that open systems will be more cost effective. The guarantee of freedom for competition that open systems bring with them in itself almost guarantees that."

He looks at the pitfalls inherent in "standards", pointing out that a particular standard for computer communication defined little more than the number of pins in an electrical interface and their position in a plug or socket. "The scope of the standard does not include a definition of the type of information that each of the lines should carry. One result of this was that a couple of suppliers created a niche market in little black boxes that identified exactly what was going down each wire. Along the way, however, a lot of users became sadly disillusioned with standards."

Many people are going to remain disillusioned with standards and with the promises of the open systems movement unless the industry works to make the whole area a lot simpler to follow.

The impression, sadly, at too many open systems events these days is of an industry talking to itself, shut off from real life. "A trip through the relevant standards organisations is unfortunately likely to produce glazed eyes and leave the reader baffled and bewildered rather than better informed," Mr Hugo writes. Dr Gray writes of her "frustration over the last few years with the scarcity of materials which explain to those who need to make strategic decisions in this area what the relevant issues are and why they are so important."

Until open systems live up to their promise of simplicity, there will be a powerful need for books such as these.

Open Systems, A business strategy for the 1990s. Pamela A. Gray. McGraw-Hill 1991. Practical Open Systems, A guide for managers. Ian Hugo MCC Blackwell 1991.

Alan Cane

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NETWORKING AND OPEN SYSTEMS 11

Peter Judge investigates a world akin to that of politics

Those who set standards hope to call the tunes

THE MAIN difference between the world of politics and the world of standards is that in the world of standards, the standards are set by the standards makers.

Just like world politics, the IT industry is beset by self-seeking organisations, opinionated pressure groups and alliances, and presided over by a "United Nations" which is often powerless to intervene.

Standards have become the most important issue in IT: they are fundamental to open systems, so whoever sets them, gains great power. Suppliers have decided directly to influence the standards that concern them, and users are forming groups to ensure their needs are met.

The United Nations for all standards is the International Organisation for Standardisation (ISO) but, in IT, the International Consultative Committee for Telephony and Telecommunications (CCITT) is almost as important.

ISO is a forum of standards bodies from around 80 nations. It is a "non-profit" body of the UN proper: a voice of the industry, not of governments. It publishes standards for everything, including IT: suppliers are free to adopt them or not. Its most well-known IT work is the OSI seven-layer model, begun in 1978.

CCITT is the forum for the public telephone and telegraph (PTT) companies worldwide. In the UK and the US, privatised telephone companies have been replaced by government departments. CCITT specialises in networking and makes "recommendations" which are often treated as standards by other bodies.

CCITT uses ISO's OSI reference model for its work. ISO in turn adopted the CCITT's X.25 wide area network, X.400 electronic mail and other work as standards.

The ISO-CCITT alliance is longstanding, as is ISO's direct

link with the Institute of Electrical and Electronic Engineers (IEEE). The IEEE's work includes the local area network standards Ethernet and token ring, and the application portability interface, Posix. Between them, ISO, CCITT and the IEEE have settled the most important basic open systems standards.

But users and suppliers demand more than basic standards: new areas emerge continually, and the industry needs advice on how to implement the standards. For the most part, this comes from those concerned, working directly in consortia.

And that is where the conflict comes. Rival consortia present rival standards, and the industry must choose between them.

The industry comes close to spilling blood on portable software

served first. Standards created in this way, or by single suppliers, are called *de facto*. The most important *de facto* standards in the emerging open systems field are variations on the Unix product from AT&T Unix System Laboratories.

The spread of open systems in industry began with industry-specific bodies, such as the MAP initiative, which started defining open systems for manufacturing in 1986, to encourage suppliers to meet the needs of large suppliers including General Motors.

Now the Government OSI Profiles (UK and US GOSP), and the European Procurement Handbook for Open Systems (Ephos) are far more important. With billions of IT spending, governments can define the predominant implementations of standards.

Gospis simply take existing OSI standards and refine them to make OSI "profiles". Profiles select from the options within a set of standards. Without profiles, suppliers can make OSI products which are not compatible with each other; when products meet a particular profile, they probably will work together.

MAP is still looked after by a world federation of MAP/TOP User Groups. The UK GOSP is defined by the CCTA and the US version by the National Institute of Standards and Technology (NIST). ISO has recognised the importance of profiles, setting up a Special Group on Functional Standards (SGFS), whose job is to publish the agreed output of OSI workshops in Europe, Asia and America.

Other groups have appeared, working to make particular standards usable. The Network Management Forum has prompted faster ISO work on network management, while the ODA Consortium hopes to get electronic document standards such as Open Document Architecture (ODA) into the market quicker. The X.400 API Association, aims to help suppliers make compatible electronic mail products according to the X.400 recommendations.

But all these deal with communications only. The industry comes closest to spilling blood on portable software. Versions of Unix are available from several suppliers, and at least two main groups are fashioning versions which they hope to establish as market leader.

Unix International is out ahead at the moment, having established the Unix version from AT&T Unix System Laboratories (USL) in the market. The Open Software Foundation's version, OSF/1, is still not selling in volume to users, but it is included in the Digital/Microsoft/Compaq ACE initiative and the IBM/Apple joint venture.

Meanwhile, OSF has established the Motif user interface, and had a good reception for its Distributed Computing Environment (DCE). DCE is actually included in the rival Atlas product from UL.

UL and OSF are not the same kind of body. UL gathers specifications from hardware suppliers to tell USL what products to make; OSF actually makes products, which it then sells to its sponsors, IBM, DEC, Hewlett-Packard and others. The two are actually quite close together, as UL's use of DCE

shows. Both of them comply with international standards, including POSIX and OSF.

The body which aims to pull the industry together is X/Open. Set up by suppliers, X/Open's goal is to bring together enough standards to cover all the basic functions of an open system, including POSIX and OSF. X/Open calls this a common application environment (CAE) and it includes international standards, and *de facto* standards with wide enough support. X/Open canvasses users, in its Xtra market research, to determine what standards are required, and keeps the balance between supplier groups, such as OSF and UL.

But X/Open could face competition, from the latest in a line of militant groups of users. Standards and Open Systems (SOS), whose members include Dupont, Eastman Kodak, McDonnell Douglas and American Airlines, formed late this summer. It apparently wants to adopt a different CAE, being developed at NIST, called the application portability profile (APP).

The crucial fact is that SOS, as users, can be biased towards suppliers. SOS is also strongly in favour of many OSF standards, and could try to include these in a partisan CAE.

It is too early to tell if there will be conflict here: SOS members are mainly drawn from an earlier pressure group called the User Alliance for Open Systems, which has gone quiet since its 1990 launch.

Meanwhile, the progress of the Object Management Group (OMG) is a ray of hope. Object orientation is a key technology for a new kind of distributed computing which has yet to be delivered to the market.

In the normal way, suppliers would be at each other's throats trying to gain market share for their own ideas. But OMG appears to have persuaded the industry to agree to one standard, for the Object Request Broker, the first piece of technology for this new paradigm.

Peter Judge is the author of *Standards Makers and their Standards*, published by Technology Appraisals.

SECURITY SOFTWARE

Spies and viruses lurking in your friendly computer

IT ALMOST seems a contradiction in terms to talk about security software for networked personal computers. After all, the PC was designed to be friendly, intuitive and inviting. How can you even talk about the PC in the same breath as products designed to lock some people out and restrict access to others?

Passwords, encryption, keyboard-locking and dumb terminals are all still considered by many PC users to be part of the foreign world of the mini-computer and mainframe computer. But if PCs are to continue to penetrate the larger business computing arena at its current rate of growth, personal computer users are going to have to start thinking a great deal more about security issues.

And particularly as PCs gain further ground in "mission-critical" applications - and are offered with ever-improving connections to large PC LANs, minis and mainframes - corporate buyers must feel confident that they can implement appropriate security measures on their systems.

According to Mr Mike Tait, managing director of High Wycombe-based PC security software specialists Fifth Generation Systems, the problem is that users now have lots of power on their desks without the security procedures which were built-in to traditional mini and mainframe systems from the ground up. With increasing numbers of PCs becoming part of a company-wide network, those procedures are having to be relearned.

"It used to be that IT managers had control of security," explains Mr Tait, who was a vice-president and general manager at computer giant Unisys before joining Fifth Generation. "But the advent of the PC meant lost control because departmental heads were buying individual PCs. It became more like an advanced calculator. But with the PCs available these days, users now virtually have mainframe power on their desks and PCs have complicated integration and connecting capabilities."

European data communications equipment

Value shipments forecast -1995



Source: Frost & Sullivan

"The PC is now a serious base for company information processing. The spend on PC technology now forms the large proportion of corporate expenditure on IT systems. The majority of a company's critical information is now stored on PCs - yet typically, security has been non-existent or low, at best. This renders companies open to industrial espionage, computer virus infection and wasted time when something does go wrong."

only look at and work with the information on screen, but is unable to take a copy of it home without asking the network administrator.

Mr Jim Maud, Lotus president, says that such questions are one of the reasons why personal computers have not yet demonstrated the leaps in productivity promised when they were introduced a decade ago.

"The issue is one of integration - or really, the failure to integrate the technology of the

last 10 years into the fabric of companies - into the actual running of business," says Mr Maud. "In fact, the real pay-off will come from using information technology not just to automate tasks, but to redesign jobs, processes, management systems and organisations themselves: to use technology to design the way we work."

This applies quite aptly to the question of data security and the way that network personal computer users tend to ignore it. While it is true that PC networking and E-mail products from the major software and systems houses tend to offer reasonable security provisions, there are some things inherent in the very nature of the PCs which militate against them being as secure as the minis or mainframes systems with which they have to work in large companies.

To start with, the PC is so

simple to use that you tend not to think about the fact that you are using a computer. Yes, it is true that when you start up a PC that uses an electronic mail package, for example, you have to type in an ID and password in order to get into the mail system. But the confidence that the PC offers even to the novice user may make him or her that much more careless about the way he creates an ID or password.

Many users simply assign their own first name as their ID and then have a password that is easy to remember. The problem is that, in many cases, it takes very little brainpower to figure out someone's ID and password.

Mr Tait, however, says that password systems are more devices for user privacy than real corporate data security. He suggests that real network data security is achieved by regularly backing up data, limiting access to the PC itself, having provisions for data encryption (so that data is readable only on your network - if you put it on a floppy disc and take it home without unencrypting it first, it would be unreadable), using virus protection software and adopting proper corporate data security procedures.

It is even worth considering drafting employment contracts so that employees are responsible for the data they use - and are contractually prevented from taking data away with them when they leave the company and that they are required to make known all security passwords, he says.

"An integral part of the employment contract should be provisions for proper protection of the company's information," he concludes. "It should specify what you can and can't do with discs brought in from outside the company and lay down what happens where there is no master keyholder to all passwords - so that employees have to hand over their passwords along with the company Amex card, company car and office floor keys."

Geoff Wheelwright

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NETWORKING AND OPEN SYSTEMS 12

With their stronghold under siege, what do the manufacturers have on offer?

The mainframe loses its might

THIS YEAR the greatest proprietary stronghold of the computer business came under siege. The mainframe sector now faces the very real prospect of open systems becoming a reality.

With falling demand and shrinking margins across their proprietary mainframe markets, the world's mainframe manufacturers are now desperately trying to exceed each other in "open" moves with product announcements and statements of direction.

Over the last few months IBM has said it will run its own Unix version called AIX on its 9000 range of machines,

systems," says Mr Gavin Roach, IT infrastructure marketing manager at IBM UK.

"The problems have changed. It used to be a plea for more processing power, now they are saying 'help us to integrate our systems, and manage our data,'" he explains.

ICI also found customers

for the major customers. What they are trying to do is to move the good things they have forward, and to get greater supplier independence."

It looks as if it may be a rough ride. Mainframe systems have increasingly supported open systems communications standards over the past 10 years. The hot issue now is application portability and inter-operability across different systems which require more complex and pervasive changes.

The open systems solutions being offered by the mainframe makers on today's market fall into two different, and potentially competing, categories.

First, like IBM's strategy with its mainframe version of AIX, a separate open systems operating system is being offered based on either AT&T's Unix or the Open Software Foundation's OS/2. IBM compatible mainframe supplier Amdahl has had a mainframe based Unix system available for many years called UTS which is now on its third major release. But while Amdahl can cite hundreds of UTS licences around the world, it is difficult to quantify precisely how much the product is being used and for

what purposes.

Nona of the mainframe suppliers expects to make a major killing out of this approach. "In many aspects of large systems effectiveness, comparing Unix with our MVS is chalk and cheese," says IBM's Mr Roach. "We expect most interest in the technical and scientific fields where Unix is more common, but we

of its Network Application Support Program and IBM intends making similar adaptations to MVS. Both are committed to creating an open operating system that supports the US-developed Posix standard.

ICI has already gone one step further and in May this year became the world's first company to be awarded a

thousands of businesses around the world which depend on their existing proprietary systems. The open proprietary approach offers the best of both worlds."

IBM's Mr Roach explains how this will work with the open version of MVS. "We can see there will be a lot of benefits of being able to run Posix or X/Open compliant applications that run on many different machines," he says. "On the mainframe itself, MVS applications will not be affected but they will be able to access the Posix applications. And with some changes, the Posix applications will be able to access the MVS tasks."

Since there are very few open systems applications available at the mainframe level, and much of a corporation's information resource is tied to the formats and software of its traditional mainframe systems, a gradual transition is the most that companies can hope for at this stage. Besides, most of these open proprietary products will not be available on the market until next year at least.

But does this strategy represent the past trying to catch up with the present, or is it a real solution for the future? Research predicts that

source of proprietary computing power.

"Eventually, we will be able to run open MVS across machines of many different sizes over ever-greater distances and so the mainframe itself is likely to become more an open management information switch or data server," he says.

While the large systems' open systems option that emerged this year may not spell the end of mainframes themselves, it may well extinguish the traditional mainframe culture.

Customer needs are forcing the enclaves of old world computing to be broken apart

But does this strategy — of a gradual transition to an open proprietary market — represent the past trying to catch up with the present, or is it a real solution for the future?

"We expect a number of our customers will choose this option above the Unix approach because it means protection of their existing investments," he adds.

The most dramatic result of this process is that the role of the mainframe may change as it becomes less of a primary

and the mighty mainframe, once the epitome of computing prowess, looks set to be downgraded to just another source of information, processing power and applications on the open systems network.

Paul Tate

IBM had little choice. Most of the 29 requirements passed to it by the powerful share customer group last year were about open systems

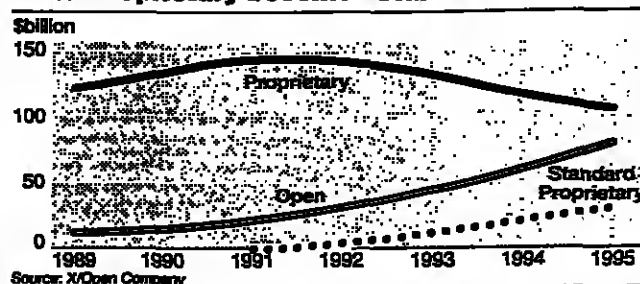
and offered more details on its plans to create an open systems version of its MVS operating system: Digital, which has a Unix version called Ultrix, has continued to promote its intentions to open up its own VMS operating system; and Britain's ICL has launched a new version of its proprietary mainframe product called Open VME.

More open mainframe announcements are likely to be on the way from other manufacturers, from Unisys to Bull. IBM had little choice. Out of the 29 requirements passed to IBM by its powerful share customer group last year, "most of them were about open

pushing for an open option on its mainframes, such as British Gas which announced in September that it is to implement a new open systems IT strategy built on ICL mainframe platforms.

"British Gas saw openness as a long-term strategy," says Mr David Slavid, ICL's business manager of corporate systems. "It wants a corporate data centre that gets the most out of its data and network." He stresses that this is not a short-term issue. "You don't suddenly wave a magic wand and make your millions of lines of code portable. There is no instant fix. The next five years will be the transition era

When Proprietary becomes Standard



don't expect many companies will change to this platform in other areas. We will be able to provide the benefits through an open MVS."

That is the key to the second approach — an open version of a company's existing proprietary operating system. Digital is taking this route with its plans to open up its VMS operating system as part

hand by the international open systems organisation X/Open for a mainframe operating system.

"The general trend in mainframes is now for 'open proprietary' operating systems," says Mr Slavid. "This is a gradual move by suppliers to recognise that they must change, but they also know that there are still

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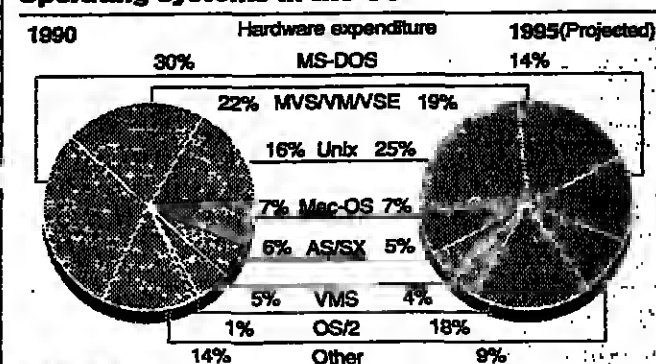


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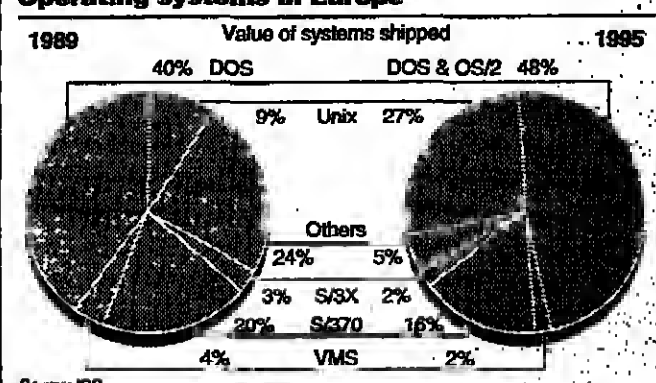
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